



iea 2012 Recife, Brazil

18th World Congress on Ergonomics | February 12-16 2012 | Recife, Brazil

IEA 2012 Parallel Sessions

Area – Activity Theories for Work Analysis and Design

Chair: Pascal Béguin, CNAM – France

Co-chairs: Francisco Castro Moura Duarte, Federal University of Rio de Janeiro - Brazil; Laerte Idal Sznelwar, University of Sao Paulo – Brazil

Date: 13/02

Room: 01

Time: 01:00 – 02:30pm

S-ATWAD 01 - Innovation and Health

New Working conditions and Consequences on Activity of Home Healthcare Workers

Corinne Van De Weerd^a, René Baratta^b

^aPreventive Ergonomics and Psychology Laboratory, Working Life Department, INRS, Vandoeuvre, France.

^bL'ouvre Boîte, Paris, France.

Innovation in the Occupational Health Physician Profession Requires the Development of a Work Collective to Improve the Efficiency of MSD prevention

S.Caroly^a, A. Landry^a, C.Cholez^a, P. Davezies^b, M. Bellemare^c, N. Poussin^d

^aLaboratory PACTE, University of Grenoble ^bUniversity of Lyon ^cDepartment of industrial relations, University Laval ^dLaboratory clinical activity, CNAM

Efficiency of personal protective equipment used in agriculture

Luiz Antônio Meirelles^a, Marcelo Motta Veiga^{b,c}, Francisco José de Castro Moura Duarte^a

^aCOPPE, Federal University of Rio de Janeiro; ^bBusiness School, Federal University of Rio de Janeiro State, Brazil ^cNational School of Public Health, Oswaldo Cruz Foundation, Brazil

The use of pesticides in French viticulture: a badly controlled technology transfer

Garrigou Alain^{a et b}, Isabelle Baldi^b, and Jackson Marçal^c

^aDepartment of Hygiene, Sécurité & Environnement, Technical Institute of University Bordeaux 1, France

^bLaboratoire Santé Travail Environnement, ISPED, Université Bordeaux 2. ^cFundacentro, Brazil

Can Activity be understood out of Subjectivity?

Hubault F.^a and Sznelwar L.I.^b

^aCEP- Ergonomics and Human Ecology - University of Paris 1 Panthéon – Sorbonne, & ATEMIS, France.

^bDepartment of Production Engineering of the Polytechnic School of the University of São Paulo, Brazil.

Area – Activity Theories for Work Analysis and Design

Chair: Pascal Béguin, CNAM – France

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Date: 13/02
Room: 01
Time: 02:30 – 04:00pm

S-ATWAD 02 - Innovation and Organization

Evolving networks and the logics of fluency in rail traffic control
Seppanen, L
Finnish Institute of Occupational Health - Finland

Contributions of ergonomics to the construction of bus drivers health and excellence in public transport and at work
Claudio Brunoro, Laerte Idal Sznelwar, Ivan Bolis and Julia Abrahão.
Production Engineering department, University of São Paulo, Brazil.

The 193 Call Center, a Meaningful Public Service!
Maud Eickhoff, Laerte Idal Sznelwar
Department of Production Engineering of the Polytechnic School of the University of São Paulo, Brazil.

Organization of work in interaction between the paramedics and the patient
Petra Auvinen^a and Hannele Palukka^b
^aSchool of Social Sciences and Humanities, University of Tampere, Finland ^bSchool of Management, University of Tampere, Finland
Working in verticalized platform vessel: an ergonomic approach in the oil industry
Garotti, Luciano^a, Mascia, Fausto^b
^aCENPES - Petrobras – Rio de Janeiro, Brazil. ^bDepartment of Production Engineering, University of São Paulo, Brazil.

Area – Activity Theories for Work Analysis and Design

Chair: Pascal Béguin, CNAM – France
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Date: 13/02
Room: 01
Time: 04:30 – 06:00pm

S-ATWAD 03 - Innovation and Production / Innovation and Risk

Contributions from the activity analysis to the products development project: case study based on a project of innovation and comfort in aircraft's cabins
Gregghi, F. M.; Rossi, N. T.; Souza, G.B.J; and Menegon, L. N.
Industrial Engineering Department, Federal University of São Carlos (UFSCar), Brazil

Design of educational artifacts as support to learning process
Adson Eduardo Resende^a, Flávio Henrique Vasconcelos^b
^aLaboratory of Ergonomics and Technical High School, ^bDepartment of Electrical Engineering, Federal University of Minas Gerais, Brasil.

Contributions of ergonomics for a support education tool: methodology analysis
Mascia, F ; Abrahao, J ; Montedo, U ; Fleury, A
University of Sao Paulo, Brasilia University - Brazil

Coordination and artifacts in joint activity: the case of tagging in high-risk industries
François Palaci^{a,b}, Geneviève Filippi^a and Pascal Salembier^b
^aGroupe Facteurs Humains, Département Management des Risques Industriels, EDF R&D, France. ^bÉquipe Tech-CICO, Institut Charles Delaunay, Université de Technologie de Troyes, France

The Process of Constructing New Competencies in the Family Agricultural Production Unit
Uiara Bandineli Montedo^a
^aDepartment of Production Engineering, Polytechnic School, University of São Paulo, Brazil.

How the ergonomic analysis of the activity can bring operational readiness and give a meaning to the pesticides risk prevention. An approach in two agricultural sectors
Garrigou, A ; Mohammed-Brahim, B
Dpt HSE, Institute Of Technology, University Bordeaux 1, France

Area – Activity Theories for Work Analysis and Design

Chair: Pascal Béguin, CNAM – France

Co-chairs: Francisco Castro Moura Duarte, Federal University of Rio de Janeiro - Brazil; Laerte Idal Sznelwar, University of Sao Paulo – Brazil

Date: 14/02

Room: 01

Time: 01 – 02:30pm

S-ATWAD 04 - Innovations: Conceptual Approaches

Finding disturbances in on-farm biogas production
Pereira-Querol, Marco Antonio^a; Seppänen, Laura^b
^aCenter of Research on Activity and Learning, Institute of Behavioural Sciences, University of Helsinki, Finland ^bThe Finnish Institute of Occupational Health, Finland

Activity at work, innovation and sustainable development
Béguin, P.^a, Duarte, F.^b, Lima^c F. and Pueyo, V^d
^aDépartement Sciences pour L'action et le Développement (SAD-APT) - INRA, France ^bProduction Engineering Program – COPPE/UFRJ – Federal University of Rio de Janeiro, Brazil ^cProduction Engineering Department – UFMG - Federal University of Minas Gerais – Brazil ^dInstitut d'Etudes du Travail de Lyon, France

The concept of Contradiction in Ergonomics Practice
Dimitris Nathanael^a, Nikos Zarboutis^b and Nicolas Marmaras^a
^aErgonomics Unit, School of Mechanical Engineering, National Technical University of Athens, Greece
^bWORKSYSTEMS Engineering, Greece

User-driven innovation of an outpatient department
Ole Broberg and Kasper Edwards
Department of Management Engineering, Technical University of Denmark, Lyngby, Denmark

Analyzing innovation as a change within “professional worlds”

Béguin, P ; Pueyo, V

Institut National de Recherche Agronomique, IETL, Université Lyon2 – France

Ergonomics in projects of oil platforms in a change context

Barbara Oggioni^a, Francisco Duarte^a and Cláudia Cordeiro^a

^aProduction Engineer Department, Federal University of Rio de Janeiro (COPPE/ UFRJ), Brazil

Date: 14/02

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S-ATWAD 05 - Innovation: Methods for Innovation and Activity at Work

Expanding uses of Building Information Modeling in life-cycle construction projects

Kerosuo Hannele, Miettinen Reijo, Mäki Tarja, Paavola Sami, Korpela Jenni and Rantala Teija

Institute of Behavioural Sciences, Center for Research on Activity, Development and Learning, University of Helsinki, University of Helsinki, Finland

The use of participant-observation protocol in an industrial engineering research

Renato da Silveira e SILVA^a, Laerte Idal SZNELWAR^a and Victor D’Afonseca e SILVA^a

^aProduction Engineering Department – University of São Paulo - São Paulo/SP - Brazil

Intermediary objects in the workspace design process: means of experience transfer in the offshore sector

Carolina Conceição^a, Gislaïne Silva^a, Ole Broberg^b and Francisco Duarte^a

^aCOPPE, Federal University of Rio de Janeiro, Technology Center, Rio de Janeiro, Brazil ^bDTU Management Engineering, Technical University of Denmark, Lyngby, Denmark

Work situation operative model MOST: linking diagnosis and intervention to improve work conditions

Karen Lange Morales^{a,b,c}, Gabriel García-Acosta^{a,d}, William Urueña-Téllez^e and Adriana Pérez^f

^aMIMAPRO Research Group – School of Industrial Design, National University of Colombia, Colombia

^bErgofactos Ltda, Colombia ^cInstitute of Ergonomics, Darmstadt University of Technology, Germany ^dCentre de Disseny d’Equips Industrials, Technical University of Catalunya, Spain ^e Pontifical Catholic University of Ecuador, Ecuador ^fTriatecsa, La Huerta, Ecuador

The start up as a phase of architectural design process

Iara SOUSA CASTRO¹, Francisco de PAULA ANTUNES LIMA², Francisco JOSÉ DE CASTRO MOURA DUARTE³

¹ School of Design at the Federal University of the State of Minas Gerais; ² Department of Production Engineering at the Federal University of Minas Gerais; ³ Program of Production Engineering at the Federal University of Rio de Janeiro

Area - Aerospace Human Factors and Ergonomics

Date: 14/02

Room: 02

Time: 01 – 02:30pm

S-AHFE 01 - Human Factors and Ergonomics in Aerospace 1

Chair: Guy A. Boy, Florida Institute of Technology - USA

The realistic consideration of human factors in Model Based Simulation tools for the air traffic control domain

Gabriella Duca^a, Erminia Attaianese^a

^aDepartment DICATA / LEAS Laboratory, University of Naples Federico II, Italy

Analysis of the work of air traffic controllers of the approach control area (APP) of Porto Alegre, Brazil

C. V. Vargas^a, L. B. de M. Guimarães^a and A. M. O. Sant'Anna^b

^aGraduate Program in Industrial Engineering, Federal University of Rio Grande do Sul, Brazil ^bIndustrial and Systems Graduate Program, Pontifical Catholic University of Parana, Brazil

Factor interaction influences on human performance in air traffic control: The need for a multifactorial model

Tamsyn Edwards^a, Sarah Sharples^a, John R. Wilson^a and Barry Kirwan^b

^aHuman Factors Research Group, University of Nottingham, University Park, UK ^bEurocontrol Experimental Centre, France

Application of the user-centred design process according ISO 9241-210 in air traffic control

Christina König^a, Thomas Hofmann^b and Ralph Bruder^a

^aDarmstadt University of Technology, Germany ^bUniversity of Applied Sciences Osnabrück, Germany

Air accident investigation among regulatory agencies

Marcia Fajer^a, Frida Marina Fischer^b

^aDefense State Ministry, Aeronautics Air Command, São Paulo, Brazil ^bDepartment of Environmental Health, University of São Paulo, Brazil

Manual Flying Skills under the Influence of Performance Shaping Factors

Andreas Haslbeck^a, Ekkehart Schubert^b, Linda Onnasch^c, Gerhard Hüttig^b, Heiner Bubb^a, and Klaus Bengler^a

^aInstitute of Ergonomics, Technical University of Munich, Garching, Germany ^bInstitute of Aeronautics and Astronautics, Section Flight Guidance and Air Transportation, Technical University of Berlin, Germany

^cWork, Engineering & Organizational Psychology, Department of Psychology and Ergonomics, Technical University of Berlin, Germany

Date: 14/02

Room: 02

Time: 02:30 – 04:00pm

S- AHFE 02 - Human Factors and Ergonomics in Aerospace 2

Chair: Dr. Guy A. Boy, Florida Institute of Technology, USA

Learning objects and training complex machines

Martins, Edgard¹

¹Federal University of Pernambuco- Department of Design-CAA – Brazil

Application of Diffusion Maps to Identify Human Factors of Self-Reported Anomalies in Aviation

Chris Andrzejczak; Waldemar Karwowski; Piotr Mikusinski

Department of Industrial Engineering and Management Systems, Orlando, FL; Department of Industrial Engineering and Management Systems, Orlando, FL; Department of Mathematics, Orlando, FL

Could mild hypoxia impair pilot decision making in emergencies?

Stephen Legg^a, Stephen Hill^b, Toby Mundel^c, Andrew Gilbey^d, Zac Schlader^c and Aaron Raman^c

^aCentre for Ergonomics, Occupational Safety and Health, School of Management, College of Business, New Zealand ^bSchool of Psychology, College of Humanities, Massey University, New Zealand ^cSchool of Sport and

Exercise, College of Sciences, Massey University, New Zealand ^dSchool of Aviation, College of Business, Massey University, New Zealand

Targeting zero error in aviation maintenance: introducing ErroDefect, a tool for further aviation safety enhancement

Rashid, H

Cranfield University – United Kingdom

The application of waste management systems for long duration spaceflight

James M. Oglesby

Institute for Simulation and Training, Department of Psychology, University of Central Florida, United States of America

Achieving Impact in Ergonomic Research

Nick McDonald^a, Marie Ward^a and Rabea Morrison^a

^aAerospace Psychology Research Group, Trinity College Dublin, College Green, Ireland

Date: 14/02

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S- AHFE 03 - Human Factors and Ergonomics in Aerospace 3

Chair: Dr. Guy A. Boy, Florida Institute of Technology, USA

The passing of the shift in aircraft maintenance - a task that produces deaths

Campos, Reginaldo ¹, MARTINS, Edgard ²; SOARES, Marcelo ³

¹Departament of Design – Federal University of Pernambuco – Brazil ²Departament of Design – Caruaru – Federal University of Pernambuco – Brazil ³Departament of Design – Caruaru – Federal University of Pernambuco, Brazil

AUTOMATION UNDER SUSPICION - CASE FLIGHT AF-447 AIR FRANCE

Martins, Edgard¹; Soares, Marcelo²

¹Federal University of Pernambuco- Department of Design- CAA – Brasil ²UFPE- Federal University of Pernambuco- Department of Design- CAA – Brasil

Preliminary study of the pilot's workload during emergency procedures in helicopters air operations

Flávio G. V. Bezerra^a, Selma L. O. Ribeiro^{b,c}

^{a,b} Aeronautical Engineering Division (IEA.) Technological Institute of Aeronautics (ITA). ^a Secretary of Public Security of the State of Mato Grosso, Integrated Air Operations Center - CIOPAer, Marechal Rondon International Airport, Brazil ^bNational Institute for the Spatial and Aeronautical Development - Brazil ^c Estácio de Sá University

Modeling activities in air traffic control systems: antecedents and consequences of a mid-air collision

Paulo Victor R. de Carvalho ^a, Bemildo Ferreira^b

^aNuclear Engineering Institute, Brazil ^bBrazilian Federation of Air Traffic Controllers Association, Brazil

Ergonomics design at workstations of air traffic controllers in a small airport

Brandão, E ; Moraes, A ; Mattos, A

Pontifical Catholic University of Rio de Janeiro - Brazil

An approach to aircraft seat comfort using interface pressure mapping

Flavia Renata Dantas Alves Silva Ciaccia^a and Laerte Idal Szelwar^a

^aDepartment of Production Engineering, School of Engineering - University of São Paulo, Brazil.

Area – Affective Product Design

Chair: Halimahtun M. Khalid, Damai Sciences – Malaysia

Co-chair: Tal-Oron Gilad, Ben-Gurion University – Israel

Date: 13/02

Room: 02

Time: 01 – 02:30pm

S-APD 01 - Affective Product Design 1

A first empirical investigation into the pleasure of control as explaining factor in usage durations of information systems

Michaela Kauer and Ralph Bruder

Institute of Ergonomics, Technical University of Darmstadt, Germany

Subjective and objective evaluation of sense of space for vehicle occupants based on anthropometric data Pitarn Hiamtoe^{a,b}, Florian Steinhardt^{a,b}, Uwe Köhler^a and Klaus Bengler^b

^aDepartment of geometric design and integration body, BMW AG, Germany ^bInstitute of Ergonomics, Technical University of Munich, Germany

The effect of system aesthetics on trust, cooperation, satisfaction and annoyance in an imperfect automated system

Alona Weinstock, Tal Oron-Gilad and Yisrael Parmet

Department of Industrial Engineering and Management, Ben-Gurion University of the Negev, Israel.

The perception of fear when using urban furniture

Gabriela Pizzato^a, Lia Guimarães^b, Arlei Damo^c

^aDepartment of Design and Graphic Expression, Federal University of Rio Grande do Sul – UFRGS - Brazil

^bPost graduate program in Production Engineering, Federal University of Rio Grande do Sul (PPGEP/UFRGS),

Brazil ^cPost graduate program in Anthropology, Federal University of Rio Grande do Sul (PPGAS/UFRGS), Brazil

Personality of Social Robots Perceived Through the Appearance

Benedict Tay Tiong Chee ^a, Park Tazoon^a, Qianli Xu^b, Jamie Ng^b, Odelia Tan^b

^aSchool of Mechanical & Aerospace Engineering College of Engineering, Nanyang Technological University,

Singapore ^bInstitute for Infocomm Research, Agency for Science, Technology and Research, Singapore

Date: 13/02

Room: 02

Time: 02:30h – 04:00pm

S-APD 02 - Affective Product Design 2

Usability and the emotional relationships in collective buying sites: A case study.

J. E. Silveira, T. P. Anjos and L. A. Gontijo

Post graduate Program in Production Engineering, Federal University of Santa Catarina, Technology Center, Brazil

The perception of pleasantness in a product of collective use: the bus shelter

Gabriela Pizzato^a, Lia Guimarães^b and Carla ten Caten^b

^aDepartment of Design and Graphic Expression, Federal University of RS - UFRGS, Brazil ^bGraduate Program in Production Engineering, Federal University of RS (PPGEP/UFRGS), Brazil

Protection or pleasure: female footwear

Mariana Seferin^a and Júlio van der Linden^{a,b}

^aPost Graduate Program in Design, Federal University of Rio Grande do Sul, Brazil ^bDepartment of Design and Graphic Expression, Federal University of Rio Grande do Sul, Brazil.

Comfort Model for Automobile Seat

Lizandra da Silva^a, Silvana Ligia Vincenzi Bortolotti^b, Izabel Carolina Martins Campos^{a,c}, Eugenio Andrés Díaz Merino^a

^a Federal University of Santa Catarina - UFSC, Brazil. ^b Technological Federal University of Paraná - UTFPR, Brazil. ^c State Secretary of Administration's Office

Area – Aging

Chair: Clas-Hakan Nygardm, University of Tampere - Finland

Date: 13/02

Room: 03

Time: 01 – 02:30pm

S-Aging 01 - Working Late

Physical workload and thoughts of retirement

Perkiö-Mäkelä, Merja^a and Hirvonen, Maria^a

^a Finnish Institute of Occupational Health, Finland

Ergonomics of Bridge Employment

Mokdad Mohamed

Department of Psychology, College of Arts, Bahrain University, Bahrain

High work ability in the scientific activity of older and experienced academics

Ülo Kristjuhan & Erika Taidre

Department of Work Science and Safety, Tallinn University of Technology, Estonia

Working late - workplace design and healthy ageing

Haslam, R ; Haslam, C ; Williams, E ; Gyi, D ; Gibb, A

Loughborough University - United Kingdom

Work ability among nursing personnel in public hospitals and health centers in Campinas – Brazil

Inês Monteiro^a, Manuela de Santana Pi Chillida^b and Luciana Contrera Moreno^b

^a Faculty of Medical Sciences. University of Campinas – UNICAMP. ^b Hospital das Clínicas. University of Campinas – UNICAMP, Brazil. ^c Federal University of Mato Grosso do Sul, Brazil.

An individually tailored programme decreased long-term sickness absence among aging food factory workers

Nygaard, C I Siukola, A ; Huhtala, H ; Virtanen, P

University of Tampere - Finland

Date: 13/02
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S-Aging 02 - Usage and usability

Mobile Phones and Elderly People: a noisy communication

Stamato, Cláudia^a, Moraes, Anamaria de^b

^aDesign Department, Pontifical Catholic University of Rio de Janeiro, Brazil. ^bDesign Department, PUC-Rio, Brazil.

Application and analysis of the Affinities Diagram on the examination of usability problems among older adults

José Guilherme Santa-Rosa^a, Heloisa Fernandes^b

^{a,b} Art Department, (Laboratory of Usability Experiments), Federal University of Rio Grande do Norte, Brasil

Comparing the usage of personal computers and multitouch tablets for older adults: findings from a field study, new opportunities and challenges for ergonomics research and applications

Vandi, C ; Duarte, L ; Tijus, C

Université Paris 8-Saint Denis, Université Paris 8 – France

Development of guidelines for designing appliances for older persons

Peter G Higgins and Adam Glasgow

Swinburne University of Technology, Australia

Environmental ergonomics for the elderly: architecture, equipment and furniture

Gualberto, A ; Masculo, F

Federal University of Paraiba – Brazil

PROCESS OF PRECOCIOUS FUNCTIONAL AGING IN WORKERS OF LAUNDRIES

Simone Caldas Tavares Mafra^a, Celina Angélica Lisboa Valente Carlos^b e Vania Eugênia da Silva^c

^{a, b, c}Departament of Home Economics, Federal University of Viçosa, Brazil

Date: 13/02
Room: 03
Time: 04:30 – 6:00pm

S-Aging 03 – Telemedicine

A usability gap between older adults and younger adults on interface design of an Internet-based telemedicine system

Young J. Chun^a and Patrick E. Patterson^a

^aDepartment of Industrial Engineering, Texas Tech University, USA

A suggestion for future research on interface design of an Internet-based telemedicine system for the elderly

Young J. Chun^a and Patrick E. Patterson^a

^aDepartment of Industrial Engineering, Texas Tech University, USA

The Relevance of Temporal Iconicity with Instruction Manuals for Elderly Users

Alexander Mertens^a, Claudia Nick^a, Stefan Krüger^b, and Christopher M. Schlick^a

^aChair and Institute of Industrial Engineering and Ergonomics of RWTH Aachen University, Germany

^bMedical Clinic I, Medical Faculty, RWTH Aachen, Germany

Elderly-Technology Interaction: accessibility and acceptability of technological devices promoting motor and cognitive training.

Tiziana C. Callari^a, Silvia Ciairano^b and Alessandra Re^a

^a LIDEA-InterDepartmental Laboratory of Applied Ergonomics, Department of Psychology, University of Turin, Italy ^bLaboratory of Developmental Psychology, Department of Psychology, University of Turin, Italy

Age Differences and Transfer on Control Solution Testing with Blood Glucometers

Christopher B. Mayhorn^a and Eric D. Carpenter^a

^aDepartment of Psychology, North Carolina State University, USA

Date: 14/02

Room: 01

Time: 04:30 – 06:00pm

S-Aging 04 – Age and work capacity

Life-style factors predicting the changes in aerobic capacity of ageing firefighters at three- and thirteen-year follow-ups

Punakallio, A ; Lusa, S ; Luukkonen, R ; Lindholm, H

Finnish Institute of Occupational Health – Finland (nao esta na lista)

Sleep disturbances predict long-term changes in musculoskeletal pain among firefighters: a 13-year follow-up study

Lusa, S ; Punakallio, A ; Miranda, H ; Luukkonen, R

Finnish Institute of Occupational Health – Finland (nao esta na lista)

Universal Design and Accessibility: an Approach of the Influence of Muscle Strength Loss in the Risk of Falls in the Elderly

Reis, P.^{a,b}, Moro, A.^{a,b,c} Bins Ely, V.^a Fernandes, C.^{a,e} Vilagra, J.^d Peres, L.^d Fogaça Junior, O.^f and Merino, Eugenio^a

^aFederal University of Santa Catarina, Brazil ^bInstitute of Ensino Superior of Foz do Iguaçu, Brazil ^cFederal University of Santa Catarina, Brazil ^dUniversity of West of Paraná, Brazil ^eTechnological Federal University of Paraná, Brazil ^fNorth University of Paraná, Brazil

Ergonomics as a tool in prolonging youth and postponing ageing

Ülo Kristjuhan

Department of Work Science and Safety, Tallinn University of Technology, Estonia

An ergonomic approach to improve work conditions of older employees in social housing

Sylvain BIQUAND^a, Nadia HEDDAD^b

^a Abilis ergonomie, France. ^b CEP Université Paris1-Panthéon Sorbonne, France

Ergonomics, design, accessibility and housing for the elderly

Fernandes, J ; Carvalho, R

Federal University of Rio Grande do Norte – Brazil

Area – Ergonomics Analysis of Work and Training

Chair: Marcelo Soares, Federal University of Pernambuco - Brazil

Date: 13/02
Room: 06
Time: 01 – 02:30pm

S-EAWT 01 – Physical Demand at Work 1

Chair: Venkatesh Balasubramanian

Department of Engineering Design at Indian Institute of Technology, India

Ergonomic analysis of work in a small corporation

Branco, I ; Rodrigues, M ; Almeida, L ; Rodrigues, B ; Shimiooshi, J ; Rodrigues, E
Brasilia University – Brazil

A polynomial equation to predict low back compression force: Accounting for the effects of load height on instability

Inger Christina Calder^a, Jim R. Potvin

^aMayo Clinic, USA ^bDepartment of Kinesiology, McMaster University, Canada

Interaction between employees' physical load factors and early support at the workplace

Simo Kaleva, MSc, Dr. Johanna Turja, Marketta Kivistö, MSc and Dr. Jorma Seitsamo

Finnish Institute of Occupational Health, Finland

An Equation to Predict Maximum Acceptable Loads For Repetitive Tasks Based on Duty Cycle: Evaluation with Lifting and Lowering Tasks

Jim R. Potvin^a

^aDepartment of Kinesiology, McMaster University, Canada

Ergonomic intervention in Aonla pricking operation during preserve preparation in food Processing Industries

Arpana Rai^a, Sudesh Gandhi^b, Nitin Kumar^c, D.K.Sharma^d and M.K.Garg^e

^aDeptt. of Family Resource Management, COHS, CCSHAU, India ^bDeptt. of Family Resource Management, COHS, CCSHAU, India ^cDeptt of AP&FE, COA&E, CCSHAU, India. ^dDeptt. Of AP&FE, COA&E, CCSHAU, India.

^eDean, COA&E, CCSHAU, India.

The passing of the shift in aircraft maintenance - a task that produces deaths

Reginaldo Campos¹; Edgard Martins² and Marcelo Soares¹

¹Department of Design-Federal University of Pernambuco, Brazil; ² Department of Design – Caruaru - Federal University of Pernambuco, Brazil

Date: 13/02
Room: 06
Time: 02:30 – 04:00pm

S-EAWT 02 – Physical Demand at Work 2

Assessment of physical workload in boiler operations

Valéria Antônia Justino Rodrigues, Environmental Engineer, M.S.^a, Camila Soares Braga, Forest Engineer,

Graduate Student^b, Julio César Costa Campos, M.S., D.S.^c, Amaury Paulo de Souza, M.S., Ph.^d, Luciano José

Minette, M.S., D.S.^e, Guilherme Luciano Sensato, Work Safety Engineer^f, Angelo Casali de Moraes, Forest Engineer, Graduate Student^g, Emília Pio da Silva, M.S., D.S.^h.

^{a,b,d,e,f,g,h}Ergonomic Laboratory – Forest Engineering Department, Federal University of Viçosa, Brazil

^cProduction and Mechanical Engineering Department, Federal University of Viçosa, Brazil

Physical Demands during the hauling of fishing nets for artisan fishing using rafts in beach of Ponta Negra, Natal-Brasil

Anelena Jaeschke^a, Maria Christine Werba Saldanha^b

^aUFRN- Federal University of Rio Grande do Norte, Technology Center, Production Engineering Programme-PEP, Brazil.

Scapular positioning assessment and level of disability of ultrasonographers

Moraes, G ; Mendes, D

Federal University of Itajubá - Brazil

Validation of preventive ergonomics measurements for process generating of repeating occupational musculoskeletal disease

Hernandez, P

Mutual Security Chilean Chamber of Construction – Chile

The effects of functional limitations on Soldier common tasks

Major John R. Bacon^a, Dr. Thomas J. Armstrong^b and LTC Teresa L. Brininger^b

^aDepartment of Mathematical Sciences, United States Military Academy, United States ^bCenter for Ergonomics, University of Michigan, United States ^cTelemedicine and Advanced Technology Research Center, United States

Physical work load during firefighting in Chilean volunteers

Javier A. Freire Herrera^a, Felipe E. Meyer Cohen^a and Elías S. Apud Simón^a

^aUnit of Ergonomics, University of Concepcion, Chile

Date: 13/02

Room: 06

Time: 04:30 – 06:00pm

S-EAWT 03 – Physical Demand at Work 3

The Cognitive Ergonomics and the Articulation of the Functions of Industrial Products

Sabrina Talita Oliveira^a and Adriano Heemann^b

^a Design Department - Federal University of Parana, Brazil ^b Post-Graduate Program in Design, Federal University of Parana, Brazil

Physiological Stress Assessment of Female Workers at Kitchen Workstation

Hema Bhatt^a and M K Sidhu^b

^aDepartment of Family Resource Management, G.B. Pant University of Agriculture & Technology, India

^bDepartment of Family Resource Management, Punjab Agricultural University, India

Level of self-reported neck/shoulder pain and biomechanical workload in cleaners

Pascal Madeleine^a, Karen Sjøgaard^b, Andreas Holtermann^c and Afshin Samani^a

^aDept. of Health Science and Technology, Aalborg University, Denmark ^bInstitute of Sports Science and Clinical Biomechanics, University of Southern Denmark, Denmark ^cNational Research Centre for the Working Environment, Denmark

Workers' Postural Conditions in the Charcoal Production Process Based on Vertical Metallic Cylinders
Ivana Márcia Oliveira Maia^a and Antonio Carlos de Francisco^b

^aFederal Institute of Education, Science and Technology of Maranhão, Brazil ^bTechnological Federal University of Paraná, Brazil

HEAVY PHYSICAL WORK UNDER TIME PRESSURE: THE GARBAGE COLLECTION SERVICE – A CASE STUDY
Ilza Mitsuko de Oliveira Camada^a, Silvana Maria Santos Pataro^b and Rita de Cássia Pereira Fernandes^{a,b}

^aDepartment of Preventive and Social Medicine, Medical School of Bahia, UFBA, Brazil. ^bMedical School of Bahia, UFBA, Brazil.

Evaluation of thermal overload in boiler operators

Camila Soares Braga, Forest Engineer, Graduate Student^a Valéria Antônia Justino Rodrigues, Environmental Engineer, M.S.^b, Julio César Costa Campos, M.S., D.S.^c, Amaury Paulo de Souza, M.S., Ph.D.^d, Luciano José Minette, M.S., D.S.^e, Angêlo Casali de Moraes, Forest Engineer, Graduate Student^f, Guilherme Luciano Sensato, Engineering work safety^g

^{a,b,d,e,f,g} Ergonomic Laboratory – Forest Engineering Department, Federal University of Viçosa, Brazil

^cProduction and Mechanical Engineering Department, Federal University of Viçosa, Brazil

Date: 13/02

Room: 07

Time: 01 – 02:30pm

S-EAWT 04 – Ergonomic Assessment at Work 1

Is there enough information to calculate the financial benefits of ergonomics projects?

PEREIRA DA SILVA, M.^a, PRÜFER, C.^b and AMARAL, F. G.^a

^aDepartment of Production Engineering and Transportation, Federal University of Rio Grande do Sul, Brazil

^bDepartment of Production and Systems, University of Minho, Portugal

Evaluating the Effectiveness of Ergonomics Application.

Ugbebor J. N.¹ and Adaramola S. S.²

¹University of Port Harcourt, Nigeria ²Vine Tribometric Consultant, Nigeria

Evidence-Based Ergonomics: A Model and Conceptual Structure Proposal

Dierci Marcio Silveira, PhD.

Industrial Systems, Petroleum, Gas and Energy Laboratory – LABSE, Industrial and Metallurgical Engineering School, Fluminense Federal University - UFF

Justaposing a model of tasks with an appropriate model of social functioning – implications for how we approach socio-technical systems when accounting for safety and resilience

Kenneth Pettersen (no submission)

Ergonomic evaluation of a situation of co-exposure to solvents and noise in a printing of flexible packaging
Mhamdi, A., Ben Amor, A., Amri, A., Youssef, I., Ladhari, N., Gharbi, R.

Laboratoire de Toxicologie, d'Ergonomie et d'Environnement Professionnel – Faculté de Médecine de Tunis - Université Tunis ElManar, Tunisie

The utilization of infrared imaging for occupational disease study in industrial work

Marcos Leal Brioschi ^a, Maria Lúcia Leite Ribeiro Okimoto ^b and José Viriato Coelho Vargas ^c

^aPost graduate Program in Mechanical Engineering, Federal University of Paraná – Brazil ^bDepartment of Mechanical Engineering, Federal University of Paraná, Brazil ^c Department of Mechanical Engineering, Federal University of Paraná, Brazil

Date: 13/02
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Time: 02:30 – 04:00pm

S-EAWT 05 – Ergonomic Assessment at Work 2

Three years of the OCRA methodology in Brazil: critical analysis and results
Facci Ruddy, Marcatto Eduardo and Santino Edoardo
Escola OCRA Brasileira, Brazil

Correlation of Ergonomic Risk Factors with RULA in IT Professionals from India
Deepak Sharan ¹, Ajeesh PS ¹.
¹RECOUP Neuromusculoskeletal Rehabilitation Centre, INDIA

Remote Online Ergonomic Assessment in the Office Environment as Compared to Face-to-face Ergonomic Assessment
Levy Eyal^a, Professor Joseph Ribak^a and DR Yehuda Badihi^b
^aTel-Aviv University, Sackler Faculty of Medicine, School of Public Health, Israel ^bJerusalem College of Technology - Majon Lev (JCT), Israel

Performance Indicators Of Work Activity
Manoela de Assis Lahoz, João Alberto Camarotto
Federal University of São Carlos (UFSCar) – Industrial Engineering Department – Simucad Ergo & Ação Group - Brazil

Evaluation and Control of Ergonomics Actions in Federal Public Service: The case of FIOCRUZ - RJ
Simone L. Santa Isabel Ricart^a, Mario Cesar Rodriguez Vidal^b, Renato José Bonfatti^c
^aOswaldo Cruz Foundation (FIOCRUZ), Brazil e Production Engineering/COPPE, Federal University of Rio de Janeiro (UFRJ), Brazil. ^bProduction Engineering /COPPE, Federal University of Pernambuco (UFRJ), Brazil.
^cOswaldo Cruz Foundation (FIOCRUZ), Brazil

Analysing domestic activity to reduce household energy consumption
Myriam Fréjus^a and Julien Guibourdenche^{a,b}
^aElectricity of France Research and Development, France ^b University of Lyon, France

Date: 13/02
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Time: 04:30 – 6:00pm

S-EAWT 06 – Methods for Ergonomic at Work

Ergonomic Work Analysis Jobs in Recovered Factories
Gabriela Cuenca^a, Gastón Zotta^b and col.
^aDepartment of Industrial Engineer, National Technological University, Argentina

From ergonomics to design specifications: contributions to the design of a processing machine in a tire company
Moraes, A. S. P.^a, Arezes, P.M.^a, and Vasconcelos, R.^b

^aDepartment of Production and Systems Engineering, University of Minho, Portugal ^bFaculty of Psychology and Educational Sciences, University of Porto, Portugal

Assesment of managerial behavior in the correction of ergonomic problems at an airport

Anderson N. Lima^a, Valéria B. Gomes^a

^aDepartment of Industrial Engineer, Faculty of Engineer, State University of Rio de Janeiro - Brazil

Ergonomic Considerations for a Systemic Approach: the Millenium Maize Mills Project in Northern Mozambique

Ana Couvinhas^a, Patricia Ferrara^{a,b}, Denis Coelho^c, Sinezia Jorge^a and Jake Walter^a

^aTechnoServe Mozambique, Mozambique ^bDept. of Industrial and Systems Engineering, University of Wisconsin-Madison, United States of America ^cDept. of Electromechanical Engineering, University of Beira Interior, Portugal

Forensics Ergonomics in Spain. Research priorities by the Delphi technique

Llaneza Alvarez, F.J.^a, Rosal Lopez, G^b, Peña Suarez, Elsa^c and Rodriguez Suarez, J^d

^aForensic Ergonom, Spain ^bErgonomics Consultant, Spain ^cResearcher Faculty of Psychology. University of Oviedo, Spain ^dUniversity of de Oviedo, Spain

Promoting ergonomics in Algeria: Activities of “the research and training laboratory” in the University of Oran

Bouhafs Mebarki^a, Tebboune Cheikh El-Bachir^b

^aUniversity of Oran, Algeria. ^bMedical School, University of Oran, Algeria.

Date: 14/02

Room: 06

Time: 01 – 02:30pm

S-EAWT 07 – Manual Material Handling

Training in manual material handling: what is going on in the field?

Veerle Hermans^{a,b}, Griet De Preter^c, Tine Verschueren^d

^aDepartment of Ergonomics, IDEWE, External Prevention Service for Health and Safety at Work, Belgium

^bDepartment of Work Psychology, Vrije Universiteit Brussel, Belgium ^cPrevention Department, Belgium ^dAZ Monica, Belgium

Ergonomic Assessment Methodologies in Manual Handling of Loads - Opportunities in Organizations

Claudia Pires^a

^a CATIM – Center for Technical Support to Metalworking Industry, Portugal.

The manual transport of load and the commercial aviation in Brazil

Carlos André Vaz Junior^a

^aDepartment of Chemical Engineering, EQ/UFRJ, Brazil

Quantification of Hand Grasp Force Using a Pressure Mapping System

Jon W. Nicholas^a, Russel J. Corvese^a, Charles Woolley^b, and Thomas J. Armstrong^b

^aBiomedical Engineering, University of Michigan, United States ^bCenter for Ergonomics, Industrial and Operations Engineering, University of Michigan, United States

Use of ergonomics assessment tools: dissemination and application by consulting firms in ergonomics in Brazil

Camarotto, J ; Souza, V

Federal University of Sao Carlos – Brazil

Date: 14/02

Room: 06

Time: 02:30 – 04:00pm

S-EAWT 08 – Evaluating the Human Activity

Human Activity Reference Database

Guimarães, C.P.^{1,3}; Cid, G.L.^{1,3}; Santos, V.S.²; Zamberlan¹, M.C.P; Pastura, F¹.C.H; Abud¹,G.M.D; Lessa, C.¹; Batista, D.S.¹; Fraga, M. M.¹

¹National Institute of Technology (INT) / Ministério da Ciência e Tecnologia (MCT) ²Pontifical Catholic University of Rio de Janeiro (PUC) ³Plínio Leite University Center

Cognitive Chrono-Ethnography Lite - Privacy-issue-free study method for understanding human behavior: Replacing video with pseudo-first-person-view movies using movement records

Masato Nakajima^a, Kosuke C Yamada^a and Muneo Kitajima^a

^aCenter for Service Research, National Institute of Advanced Industrial Science and Technology (AIST), JAPAN

Ergonomic principles to design clothing work for electrical workers

Castillo, J

University of Rosario – Colombia

The construction of ergonomic demands: application on artisan fishing using jangada fishing rafts in the beach of Ponta Negra

Maria Christine Werba Saldanha^a, Ricardo José Matos de Carvalho^a, Larissa Praça de Oliveira, Joyce Elanne Mateus Celestino, Isis Tatiane de Barros Macêdo Veloso and Anelena Jaeschke

^aUFRN- Federal University of Rio Grande do Norte, Brazil

ERGONOMIC TRIDIMENSIONAL ANALYSIS: CRITICAL ERGONOMIC FACTORS IDENTIFICATION IN A COMMERCIAL ENVIRONMENTAL

Loureiro, I.F.^a, Leão, C.P.^a and Arezes, P.M.^a

^aDepartment of Production and Systems Engineering, University of Minho, Portugal

Science as a service: understanding successful knowledge transfer in a New Zealand research institute

Moore, D., Bayne, K. and Barnard, T.

New Zealand Forest Research Institute (SCION), New Zealand

Date: 14/02

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S-EAWT 09 – Ergonomic Evaluation of Workstations 1

Ergonomic analysis of the jeweler's workstation

Markiewicz, F ; Câmara, J ; Dias, H

Analysis of determinants in the shipment of energy expenditure of capture in activity in raftsmen Ponta Negra, Natal/RN

Sousa, T ; Saldanha, M ; Dantas, P ; Oliveira, M
Federal University of Rio Grande do Norte - Brazil

Ergonomics and environmental sustainability: a case study of raft fisherman activity at Ponta Negra Beach, Natal-RN.

Joyce Elanne Mateus Celestino^a, Cristina de Souza Bispo^b, Maria Christine Werba Saldanha^b e Karen Maria da Costa Mattos^b

^aFederal University of Rio Grande do Norte, Brazil. ^bFederal University of Rio Grande do Norte, Brazil.

Maintenance of submersible pumps in the septic tanks: ergonomic and biological risks to the worker Mariño, S ; Figueiredo, A

Bahia State University, Federal University of Bahia, National Service for Industrial Training – Brazil

Extension project: contributions to a university hospital system

Cardoso, V ; Costa, B ; Sampaio, A ; Alencar, W
Federal University of Amazonas - Brazil

Development of an instrument for assessing workstyle in checkout cashier work (BASIK)

Katarina Kjellberg^a, Peter Palm^{b,c} and Malin Josephson^b

^aDepartment of Public Health Sciences, Karolinska Institute, Sweden. ^bDepartment of Medical Sciences, Uppsala University, Sweden. ^cDepartment of Occupational and Public Health Sciences, University of Gävle, Sweden

Date: 15/02

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S-EAWT 10 – Ergonomic Evaluation of Workstations 2

Multi Dimensional System for Evaluating Preventive Program for Upper Extremity Disorders among Computer Operators

Yafa Levanon^{a,b}, Amit Gefen^a, Yehuda Lerman^a, Uri Givon^b, Navah Z. Ratzon^a

^aTel Aviv University, Israel ^bThe Motion Analysis Laboratory, Sheba Medical Center, Israel

Support of the upper limbs of office workers during a daily work journey

Ernesto Filgueiras^{a,b}, Francisco Rebelo^b and Moreira da Silva^c

^aBeira Interior University, Portugal ^bCIPER - "Interdisciplinary Centre for the Study of Human Performance" - Technical University of Lisbon, Portugal ^cTechnical University of Lisbon – Lisbon, Portugal

SITUATED MODELLING IN THE DRAWING WORKSHOP FOR BOBBIN LACE

Maria Christine Werba Saldanhar^a, Juliana Donato de Almeida

^aProduction Engineering Programme - PEP , UFRN- Federal University of Rio Grande do Norte, Brazil.

Ergonomics Work Analysis Applied to Dentistry - a Brazilian case study

Custódio RARa, Silva CESb and Brandão JGTa

^aDepartment of Mechanical, State University of São Paulo, Brazil ^bDepartment of Production Engineering, Federal University of Itajubá, Brazil

The overload at work and outside of work: the case of woman operators of blistering

Raoni Rocha Simões^a and Vitor Guilherme Carneiro Figueiredo^b

^aÉcole Doctorale de Sciences Sociales, Laboratoire d’Ergonomie, Université Bordeaux 2, France. ^bFederal University of Itajubá (UNIFEI) – Brazil.

Ergonomics Analysis of the activity of boning shoulder in a pig slaughter-house in the city of Ipiranga-SC
Lizandra Garcia Lupi Vergara^a and Thaís Regina Pansera^b

^aProduction and Systems Engineering Department, Federal University of Santa Catarina, Brazil ^bCommunity University of Chapecó, Brazil

Ergonomic Evaluation in a Values Transportation Company in Venezuela

Escalona, Evelin^a; Hernández, Maylem^a; Yanes Escalona, Lucia^a; Yanes, Laura^a y Yanes, Leopoldo^b.

^aUniversity of Carabobo, Venezuela. ^bInstitute High Studies in Health “Dr. Arnoldo Gabaldon”

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S-EAWT 11 – Ergonomics in Complex Systems 1

Investigation of the impact of main control room digitalization on operators cognitive reliability in nuclear power plants

Yong Zhou^a, HaiYing Mu^a, Jianjun Jiang^c and Li Zhang^b

^aFlight Technology College, Civil Aviation Flight University of China, China ^bHuman Factors Institute, University of South China, Hengyang, China ^cDepartment of Computer Engineering, KangDa Vocational Technical College, China

Competing values, tensions and trade-offs in management of nuclear power plants

Teemu Reiman^a and Carl Rollenhagen^b

^a VTT Technical Research Centre of Finland, Finland ^b Royal Institute of Technology, Academy for Nuclear Safety, Sweden

The contribution of ergonomics to risk analysis in the design process: the case of a future control room

Cecilia De la Garza*, Jean-Paul Labarthe* and Louis Graglia*

*Risk Management Department, EDF R&D - France

From needs to requirements for computer systems: the added value of ergonomics in needs analysis

Stanislas Couix^{a,c}, Françoise Darses^b and Cecilia De-La-Garza^c

^aCentre for Research on Work and Development, National Conservatory of Arts and Crafts, France ^bInstitute of Biomedical Research of the Armed Forces, Ministry of Defence, France ^cManagement of Industrial Risks, EDF R&D, France

Ergonomists’ contribution in requirements definition for the design of a computer based system in a control room

Couix, S | De la Garza, C | Darses, F

Pre-salt and human factors: a review of contributions of ergonomics for the technological challenges of exploration and production in Brazil

Silveira, D; Brandao, E

Fluminense Federal University - Brazil

Date: 15/02

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S-EAWT 12 – Ergonomics in Complex Systems 2

Work ability index and its association with psychosocial factors in one of the petrochemical industries in Iran

Mazloumi, A

Tehran University of Medical Science – Islamic Republic of Iran

New Procedures of Ergonomics Design in a Large Oil Company

Cynthia Mossé Alhadef^a, Rosana Fernandes da Silva^a and Márcia Sales dos Reis^a

^aCorporate Health Management, Petroleo Brasileiro S.A., Brazil

Human Factors Engineering in Oil and Gas -A Review of Industry Guidance

Martin Robb^a and Gerald Miller^b

^aHuman Factors Team, USA ^bIndependent Maritime Professional, Ge Miller & Associates, USA

Ergonomics in designing process: dialogue between designers, executors and users in the maintenance activity of radars in an oil refinery

Fabício Augusto Menegon^a, Daniela da Silva Rodrigues^b, Andréa Regina Martins Fontes^c and Nilton Luiz Menegon^b

^aFederal University of Itajubá (UNIFEI), Brazil. ^bDepartment of Production Engineering, Federal University of São Carlos (DEP/UFSCar), Brazil. ^cDepartment of Production Engineering, Federal University of São Carlos (DEPS/UFSCar), Brazil.

Analysis of the Implementation of Ergonomic Design at the New Units of an Oil Refinery

Carolina Reich Marcon Passero^{a,b}, Érika Lye Ogasawara^b, Lucy Mara Silva Baú^{a,b}, Sandro Artur Buso^a, Marcos Cesar Bianchi^a

^aPetrobras, Petróleo Brasileiro SA. Brazil. ^bFisiotrab Ergonomics, Health and Safety at Work, Brazil.

The Emergency System for the town of Milano: evaluation of an Help point.

Isabella Tiziana Steffan^a

^aStudio Steffan - Progettazione & Ricerca, Milano

Date: 16/02

Room: 06

Time: 01:00 – 02:30pm

S-EAWT 13 – Ergonomics at Health and Public Activity

Working conditions and health hazards in a medical emergency call center: TARM's case

Palma, T

Federal University of Bahia – Brazil

The inefficiency of the telephone assistance software used in a medical emergency service

Palma, T

Federal University of Bahia – Brazil

Assessment of work ability of health professionals in the mobile emergency unit

Santos, Y¹; Porto, F²; Marques, L¹; Tomaz, A¹; Toledo R²; Lucena, N²

¹UNIPÊ, University Center of João Pessoa, Brazil ²UFPB, Federal University of Paraíba

Taking care of you and care for others: an analysis of the activity of the work of technical and nursing assistants of a psychiatric institution for children and adolescents

Davidson Passos Mendes^a, Geraldo Fabiano de Souza Moraes^b, Juliana Cristina de Lima Mendes^c
^aUniversity Federal of Itajubá – Brazil. ^bUniversity Federal of Itajubá – Brazil. ^cEvangelical Hospital – Brazil.

Designing the safety of healthcare. Participation of ergonomics to the design of cooperative systems in radiotherapy

Maria Isabel Munoz, Nadia Bouldi, Flore Barcellini & Adelaide Nascimento

Research Center on work Development (CRTD) - National Conservatory of Arts and Crafts, France

Evaluation of mental workload on public employees in the administrative sector

Galvão, I ; Reis, P ; Moro, A ; Vilagra, J ; Moreira, H ; Sontag, A ; Cruz, R

Oeste do Parana State University, Federal University of Santa Catarina – Brazil

Date: 16/02

Room: 06

Time: 02:30 – 04:00pm

S-EAWT 14 – Methods for Ergonomic at Work

Conceptual design pattern for ergonomic workplaces

Fonseca, Bernardo Bastos^a, Aguilera, Maria Victoria Cabrera^b and Vidal, Mario Cesar Rodríguez^c

^aDepartment of Production Engineer, Federal University of Rio de Janeiro, Brazil ^bDepartment of Production Engineer, Universidade Federal do Rio de Janeiro, Brazil ^cDepartment of Production Engineer, Universidade Federal do Rio de Janeiro, Brasil

Participatory ergonomics and design of technical assistance

Claudia Isabel Rojas Rodríguez

Pedagogical and Technological University of Colombia - Colombia

Effects of early support intervention on workplace ergonomics – a two-year follow-up study

Dr. Johanna Turja, Simo Kaleva, MSc, Marketta Kivistö, MSc and Dr. Jorma Seitsamo

Finnish Institute of Occupational Health, Finland

A Multi-ontology view of ergonomics: applying the Cynefin Framework to improve theory and practice

Wendy Elford^a

^aNow to Next Pty Ltd, Australia

How do people differentiate between jobs: and how do they define a good job?

Wendy Jones, Roger Haslam and Cheryl Haslam

Loughborough Design School, Loughborough University, UK

Assessing suitability of similarity coefficients in measuring human mental models

Liang, S ; Tzeng, L

National Taipei University of Technology - Taiwan

Area – Ergonomics for Children and Educational Environments

Chair: Karen Jacobs, Boston University – United States

Date: 13/02

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S-ECED 01 - Children, Technology & the Environment

Perceived environmental restrictions for the participation of children with mild developmental disabilities
Ratzon, N ; Rosenberg, L ; Brat, O ; Jarus, T
Tel Aviv University, UBC - Israel

Usability testing with children: an application of Pedactice and Ticese methods
Alessandra Carusi^a, Cláudia Mont'Alvão^a
^aArts & Design Department, Pontifical Catholic University of Rio de Janeiro, Brazil

Evaluation of students phoning, texting and/or web surfing while crossing streets
Schulze, L
University of Houston – USA

Comparison of postural evaluation and self-report questionnaire among schoolchildren in school workshop
Md Hashim, A
University of Malaya – Malaysia (não está na lista)

Ergonomic Evaluation of Postural Stress in School Workshop
Adila Md Hashim, Siti Zawiah Md Dawal and Nukman Yusoff
Department of Engineering Design and Manufacture, University of Malaya, Malaysia

Usability issues in Learning Management Systems (LMS)
Maria Isabella de Porto Alegre Muniz^a and Anamaria de Moraes^b
LEUI - Arts and Design Department, PUC-Rio - Pontifical Catholic University of Rio de Janeiro

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S-ECED 02 - Children's Computer Use

A proposed model representing the relationships between user characteristics, computer exposure and musculoskeletal symptoms in children.

C.Harris^{a,b}, L.Straker^b, A. Smith^b and C. Pollock^c

^aSchool of Occupational Therapy and Social Work, Curtin University, Australia. ^bSchool of Physiotherapy, Curtin University, Australia ^cSchool of Psychology and Speech Pathology, Curtin University, Australia

Children computer mouse use and anthropometry

Erin E. Hughes^a, and Peter W. Johnson^a

^aDepartment of Environmental and Occupational Health Sciences, University of Washington, USA

Promoting healthy computer use among middle school students: a pilot school-based health promotion program

Marina Ciccarelli^a, Linda Portsmouth^b, Courtenay Harris^a and Karen Jacobs^c

^aCurtin Health Innovation Research Institute, School of Occupational Therapy and Social Work, Curtin University, Australia ^bCurtin Health Innovation Research Institute, School of Health Promotion, Curtin University, Australia ^cSargent College of Rehabilitation Sciences, Boston University, USA

An ergonomic study on the biomechanical consequences in children, generated by the use of computers at school.

Claudia PARAIZO,¹ Anamaria de MORAES,²

¹Pontifical Catholic University (PUC- Rio) LEUI-PUC-Rio, Ergonomics and Interface Usability Laboratory – Brazil ²Communication Faculty, Federal University of Rio de Janeiro (ECO/UFRJ) LEUI-PUC-Rio, Ergonomics and Interface Usability Laboratory – Brazil

Primary School Children's Knowledge of, and Attitudes towards, Healthy Computer Use

T. Tran^{a,b} and M. Ciccarelli^{a,b}

^aCentre for Research into Disability and Society, School of Occupational Therapy and Social Work, Curtin University, Perth, Australia ^bCurtin Health Innovation Research Institute, Perth, Australia

Date: 13/02

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S-ECED 03 – Potpourri I: Ergonomics with Children, Youth and College Students

Accessibility evaluation of university facilities at the University of Houston

Schulze, L

University of Houston - USA

Do teachers believe they are competent to promote healthy ICT use among their students?

R. Zlamanski^{a,b} and M. Ciccarelli^{a,b}

^aCentre for Research into Disability and Society, School of Occupational Therapy and Social Work, Curtin University, Australia ^bCurtin Health Innovation Research Institute, Australia

Postural Assessment of School Children: an input for the design of furniture

Maria Antónia Gonçalves ^a, Pedro M. Arezes ^b

^aSchool of Managements and Industrial Studies, Porto Polytechnic Institute, Portugal ^bErgonomics Laboratory, School of Engineering, University of Minho, Portugal

Post Occupancy Evaluation of primary schools in Saudi Arabia

Sana Omari^a, Andree Woodcock^b

^aDar Al-Hekma College, Saudi Arabia ^bDepartment of Industrial Design, Coventry School of Art and Design Coventry University, UK.

Analysis of teacher's workspace in a child care center

Vera Helena Moro Bins Ely^a, Vanessa Dorneles^b, Flávia Martini Ramos^c and Mariana Morais Luiz^d

^aFederal University of Santa Catarina, Brazil ^bFederal University of Santa Catarina, Brasil ^cFederal University of Santa Catarina, Brazil ^d Federal University of Santa Catarina, Brazil

Educational workload and its psycho-physiological impact on student organism

Oleksandr Burov^a, Oleksandra TSARIK^b

^aInstitute of Gifted Child, Ukraine ^bNational Aviation University, Ukraine

Date: 14/02

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S-ECED 04 - Important Ergonomic Issues with Children

Backpacks and school children's obesity: challenges for public health and ergonomics

De Paula, A. J. F.^a, Silva, J. C. P.^a, Paschoarelli, L. C.^a, Fujii, J. B.^b

^aDepartment of Design, State of São Paulo University. ^bCatholic University of State of Minas Gerais.

Anthropometric Aspects of Body Seated in School

Reis, P.^{a,b}; Moro, A. R.^{a,d,e}, Da Silva, J. ^f; Paschoarelli, L. ^f; Nunes Sobrinho, F.^g and Peres, L.^c

^aFederal University of Santa Catarina, Brazil ^bCollege Institute of Foz do Iguaçu, Brazil ^cUniversity of West of Paraná, Brazil ^dDepartament of Physical Education, Federal University of Santa Catarina, Brazil ^eFederal University of Santa Catarina, Brazil ^fState of São Paulo University ^gFederal University of Rio de Janeiro

The use software ERGOSHOW in the education of health and safety at work to regardin the safety to children

Sharinna Venturim Zanuncio^a, Simone Caldas Tavares Mafrá^b, Francisco Rebelo^c, Ernesto Filgueiras^b

^aFederal University of Viçosa, Brazil ^bHome Economics Department, Higher Education Department of the Ministry of Education and Culture (SESu/MEC), Federal University of Vicoso, Brazil ^cSchool of Human Kinetics, Technical University of Lisbon – Portugal ^dSchool of Human Kinetics, Technical University of Lisbon – Portugal

Effects of a school based exercise program on children's resistance and flexibility

RFC Moreira^a, FH Akagi^a, PYL Wun^a, CS Moriguchi^a and TO Sato^a

^aPhysical Therapy Department, Federal University of São Carlos, Brazil

Back Pack Injuries in Indian School Children: Risk Factors and Clinical Presentations

Deepak Sharan ¹, Ajeesh P S¹, Jerrish A Jose¹, Sukrit Debnath¹, Manjula M¹

¹RECOUP Neuromusculoskeletal Rehabilitation Centre, India.

Children and teenagers working in artistic labor: Brazilian situation and international examples

S.R. Cavalcante^a and R.A.V. Vilela^b

^a School of Public Health, São Paulo University, Brazil ^b School of Public Health, São Paulo University, Brazil

Area – Ergonomics in Design

Chair: Pierre-Henri Dejean, Technical University of Compiègne - France

Date: 13/02

Room: 08

Time: 01:00 – 02:30pm

S-EinD 01 - Methods for the Ergonomic Design

Embedded Systems Engineering for Products and Services Design

Tareq Z. Ahram^a, Waldemar Karwowski^a, Marcelo M. Soares^b

^aInstitute for Advanced Systems Engineering, University of Central Florida, USA ^bDepartment of Design, Federal University of Pernambuco, Brazil

Integrating ergonomics in design processes: A case study within an engineering consultancy firm

Lene Bjerg Sørensen^{a,b}, Ole Broberg^a

^aDepartment of Management Engineering, Technical University of Denmark, DENMARK ^b ALECTIA, DENMARK

Questionnaire survey of customer satisfaction for product categories towards certification of ergonomic quality in design

Masaaki MOCHIMARU^a, Miwako TAKAHASHI^b, Nobuko HATAKENAKA^b and Hitoshi HORIUCHI^b
^aDigital Human Research Center, Japan ^bResearch Institute of Human Engineering for Quality Life, Japan
^cDelphis Inc., Japan

Product functions: interfaces with ergonomic design
Livia F. de A. Campos^a, Jamille N. de L. Lanutti^a and Luis Carlos Paschoarelli^a
^aPPGDesign, UNESP – Paulista State University, Brazil

Kaizen and Ergonomics: The Perfect Marriage
Martin Antonio Rodriguez^a, Luis Fernando Lopez^b
^aSafety and Health, Toyota Argentina S.A., Argentina. ^bHuman Resources, Toyota Argentina S.A., Argentina

Similar methodological analysis involving the user experience
Caio Márcio Almeida e Silva^a, Maria Lúcia R. L. Okimoto^b and Raffaella Leane Zenni Tanure^c
^aDepartament of Design, Federal University of Paraná, Brazil. ^bDepartment of Mechanical Engineering, Federal University of Paraná, Brazil. ^cDepartment of Production Engineering, Federal University of Rio Grande do Sul, Brazil.

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S-EinD 02 - Ergonomics and User-Centered Design

Designing with Users to meet people needs: a teaching model
Laura Anselmi^a, Marita Canina^a and Elisabetta Coccioni^a
^a INDACO Department, Polytechnic of Milan, Italy

The importance of User Centered Design methods applied to the design of a new workstation: a case study
Ronaldo Duschenes^a, Andressa Mendes^a, Adriana Betiol^b and Suzana Barreto^c
^aFlexiv Móveis, Brazil ^bInterfácil Usabilidade de Sistemas Ltda, Brazil ^cState of Londrina University, Brazil

Does the designers knowledge and experience in ergonomic principles and methods and user centred design methods result in using these principles and methods in the design process?
Kok, B
Katholieke Universiteit Leuven – Belgium (não aparece na lista)

The amount of ergonomics and user involvement in 151 design processes
Barbara N.E.Kok^{a,c}, Karin Slegers^b and Peter Vink^c
^aMedia Arts and Design Academy, Belgium ^bIBBT-K.U.Leuven Future Health Department, Belgium ^cDept. of Industrial Design Engineering, Delft University of Technology, The Netherlands.

VoiceYourView:Anytime, anyplace, anywhere user participation
Andree Woodcock, Katerina Frankova and Laurence Garton
Department of Industrial Design, Coventry School of Art and Design Coventry University, UK.

A Methodology for connecting User Centered Design (UCD) with Eco-design. The possibility of migration of products to services based on the user acceptance
Rodea Chávez Alejandro^a, Lucila Mercado Colin^b
^aAutonomous National University of México, México ^b Department of Theory and Design Process, Autonomous Metropolitan University, México

Date: 13/02
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S-EinD 03 – Ergonomics and Design for Usability 1

Design for Usability; practice-oriented research for user-centered product design
Daan van Eijk^a, Jasper van Kuijk^a, Frederik Hoolhorst^b, Chajoong Kim^a, Christelle Harkema^c, Steven Dorrestijn^d

^aDelft University of Technology, The Netherlands ^bDepartment of Engineering Technology, University of Twente ^cDepartment of Industrial Design, Eindhoven University of Technology ^dDepartment of Philosophy, University of Twente

Product and user profiles as a design technique to improve usability
Kim, C ; Christiaans, H
Delft University of Technology – Netherlands

The inclusion of ergonomic tools in the informational, conceptual and preliminary phases of the product design methodology

Ivan Luiz de Medeiros^a; Eduardo Concepción Batiz^b

^aDepartment of Design - University of Joinville Region UNIVILLE, Brazil ^bDepartment Professional Master's Degree in Production Engineering - Educational Society of Santa Catarina – SOCIESC, Brazil

Ergonomics and usability of children interfaces: Spore[®], the case study

Adriana Chammas^{a,*}, Anamaria de Moraes^b and Eduardo Ariel Teixeira^c

^aLaboratory of Ergonomics and Usability - LEUI, Pontifical Catholic University – Brazil. ^bLaboratory of Ergonomics and Usability - LEUI, Pontifical Catholic University – PUC-Rio – Brazil. ^cEscola Superior of Advertising and Marketing – ESPM-Rio – Brazil.

A children, teachers and designers as evaluators of usability of educational software

Luciana Freire^a, Marcelo Soares^b and Stephania Padovani^c

^{ab}Department of Design, Federal University of Pernambuco, Brazil ^cDepartment of Design, Federal University of Paraná, Brazil

A literature review about usability evaluation methods for e-learning platforms

Freire, Luciana Lopes^a, Arezes, Pedro Miguel^b and Campos, José Creissac^c

^{ab}Department of Production and Systems Engineering – University of Minho – Portugal ^cDepartment of Computer Science – University of Minho - Portugal

Date: 13/02
Room: 09
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S-EinD 04 – Ergonomics and Design for Usability 2

Usability in Product Design - The importance and need for systematic assessment models in product development – Usa-Design Model (U-D) ©

Giselle Schmidt Alves Díaz Merino^a, Clarissa Stefani Teixeira^a, Rodrigo Petry Schoenardie^b, Eugenio Andrés Díaz Merino^{ab}, Leila Amaral Gontijo^a

^aFederal University of Santa Catarina, Brazil ^bDepartamento de Graphic Expression, Federal University of Santa Catarina, Brazil.

Methodological proposal for optimized usability evaluation in products developed with agile methods
Melcher, C ; MontAlvao, C
Pontifical Catholic University of Rio de Janeiro – Brazil

Common criteria for usability review

Victor Nassar^a

^aDesign Department, Federal University of Paraná, Brazil.

Usability Analysis of Industrial cooking equipment

Calado, Alexana Vilar Soares ^a and Soares, Marcelo Márcio^b

^aDepartment of Design - School Boa Viagem - Brazil ^bFederal University of Pernambuco - Brazil

Study of the use of ergonomic principles of usability in Brazilian technical standards respect to products of reducing water consumption

Porto, R ; van der Linden, J

Federal University of Rio Grande do Sul – Brazil

The methodological involvement of the emotional design and cognitive ergonomics as a tool in the development of children products

Walter Correia ^a, Laís Rodrigues ^a, Fábio Campos ^a, Marcelo Soares ^a, Marina Barros ^a

^aDesign Department, Federal University of Pernambuco, Brazil

Date: 13/02

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S-EinD 05 – Ergonomics and Emotional Design

Emotion and interior space design: an ergonomic perspective

Swathi Matta Reddy, Debkumar Chakrabarti and Sougata Karmakar

Department of Design, Indian Institute of Technology Guwahati, India

Aesthetic taste versus utility: the emotional and rational of the individual

Claudia Mourthé Dr.^a, Pierre-Henri Dejean Dr.^b

^aEBA-UFRJ – Federal University of Rio de Janeiro, Brazil ^bUTC – France

Infant feeding: the interfaces between Interaction Design and Cognitive Ergonomics in user-centered design

Flavia Lima^a, Lilian Kely Araújo^b

^aFederal University of Minas Gerais ^bPUC - Minas, Pontifical Catholic University of Minas Gerais, Brazil

Product evaluation based in the association between intuition and tasks

Caio Márcio Almeida e Silva^a, Maria Lúcia L. R. Okimoto^b, Deise Albertazzi^c, Cyntia Calixto^d, Humberto Costa^e

^aDesign Department, Federal University of Paraná, Brazil. ^bMechanical Engineering Department, Federal University of Paraná, Brazil. ^cDesign Department, Federal University of Paraná, Brazil. ^dMechanical Engineering Department, Federal University of Paraná, Brazil. ^eUniversity Center of Curitiba

Design of experiment with emphasis on Intuitive Use.

Caio Márcio Almeida e Silva^a, Maria Lúcia R. L. Okimoto^b

^aDepartament of Design, Federal University of Paraná, Brazil. ^bDepartament of Mechanical Engineering, Federal University of Paraná, Brazil.

Design for Reflection

Sebastiano Bagnara^a and Simone Pozzi^{a,b}

^aFaculty of Architecture, University of Sassari-Alghero, Italy ^bDeep Blue srl, Italy

Date: 13/02

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S-EinD 06 – Ergonomics and Digital Design

Evaluating insole design with joint motion, plantar pressure and rating of perceived exertion measures

Yu-Chi Lee^a, Gloria Lin^a, Mao-Jiun J. Wang^a

^aDepartment of Industrial Engineering and Engineering Management, National Tsing Hua University, Taiwan

A mind in a disk: The attribution of mental states to technological systems

Oronzo Parlangeli, Tommaso Chiantini and Stefano Guidi

Communication Sciences Department, University of Siena, Italy

User's demography and expectation regarding search, purchase and evaluation in mobile application store.

Wilson Prata^a, Anamaria de Moraes^a and Manuela Quaresma^a

^aLEUI, Pontifical Catholic University of Rio de Janeiro (PUC-RIO), Brazil

Exploring the Opportunities for Multimodal Mobile Interaction in End-to-End Journeys

Claudia Krehla and Sarah Sharples^b

^aHorizon Doctoral Training Centre, University of Nottingham, United Kingdom ^bDepartment of Mechanical, University of Nottingham, United Kingdom

THE ERGONOMIC EVALUATION OF A VIRTUAL LEARNING ENVIRONMENT USABILITY.

Aliana Pereira Simões^a, Anamaria de Moraes^a

^aDepartment of Art and Design, Pontifical Catholic University, Brazil

Usability interface design and evaluation on personal diet management system

Lin, H ; Wang, E

National Tsing Hua University - Taiwan

Date: 14/02

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S-EinD 07 - Ergonomics and the Virtual World

Risk factors and Clinical features of Text Message Injuries

Deepak Sharan¹, Ajeesh PS¹.

¹ RECOUP Neuromusculoskeletal Rehabilitation Centre, India

Using environmental affordances to direct people natural movement indoors

Elisângela Vilar¹, Luís Teixeira¹, Francisco Rebelo¹, Paulo Noriega¹ and Júlia Teles²

¹ CIPER / Ergonomics Laboratory, FMH-Technical University of Lisbon, Portugal ² CIPER / Mathematics Unit, FMH-Technical University of Lisbon, Portugal

Participatory Design in the Project of Virtual Learning Environment of Histology

José Guilherme Santa-Rosa

Art Department, Federal University of Rio Grande do Norte, Brazil.

Developing an usability test to evaluate the use of augmented reality to improve the first interaction with a product

Deise Albertazzi^a, Maria Lucia Okimoto^b and Marcelo Gitirana Gomes Ferreira^c

^a Design Department, Federal University of Paraná, Brazil ^b Design Department, Federal University of Paraná, Brazil ^c Design Department, State University of Santa Catarina, Brazil

Use of augmented reality in the usability evaluation of products

Fernanda Faust^a, Giorgia Roepke^a, Tiago Catecati^a, Fernanda Araujo^b, Marcelo Gitirana Gomes Ferreira^a, Deise Albertazzi^c

^aDepartment of Design, State University of Santa Catarina, Brazil. ^bDepartment of Production and Systems Engineering, Federal University of Santa Catarina, Brazil ^cDepartment of Design, Federal University of Paraná, Brazil.

How to reduce workload – augmented reality to ease the work of air traffic controllers

Thomas Hofmann^a, Christina König^b, Ralph Bruder^b, Jörg Bergner^c

^aIndustrial Design, University of Applied Sciences Osnabrück, Germany ^bInstitute of Ergonomics, Darmstadt University of Technology, Germany ^c Forschung & Entwicklung, DFS German Air Navigation Services, Germany

Date: 14/02

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Time: 02:30 – 04:00pm

S-EinD 08 – Ergonomic Evaluation on Product Design 1

Ergonomic evaluation of novel tool for snap-off the neck of ampoule

Bor-Shong Liu^a, Jun-Ting Lee^b and Ching-Wen Lien^c

^aDepartment of Industrial Engineering and Management, St. John's University, TAIWAN ^b Taipei Hospital, Department of Health, TAIWAN ^c Nursing Department, Taipei Veterans General Hospital, TAIWAN

Product perception from sensory stimuli: the case of vacuum cleaner

Caio Márcio Almeida e Silva^a, Maria Lúcia R. L. Okimoto^b and Raffaella Leane Zenni Tanure^c

^aDepartment of Design, Federal University of Paraná, Brazil. ^bDepartment of Mechanical Engineering, Federal University of Paraná, Brazil. ^cDepartment of Production Engineering, Federal University of Rio Grande do Sul, Brazil.

The technological obsolescence of the brazilian electronic ballot box

Carlos Rogério Camargo^a, Richard Faust^b, Eugênio Merino^a and Clarissa Stefani^a

^aDepartment of Production Engineering, Federal University of Santa Catarina ^bDepartment of Knowledge Engineering, Federal University of Santa Catarina

Designing an Ergonomic Backpack for Student Aged 7-9 through User Centred Design approach

Mahdie Amiri^a, Mohsen Safar Dezfooli^b, Seyed Reza Mortezaei^b

^aDepartment of Industrial Design, Iran University of Science & Technology (IUST), Iran ^bDepartment of Industrial Design, Iran University of Science & Technology (IUST), Iran

The role of usability in the evaluation of accidents: human error or design flaw?

Walter Correia^a, Marcelo Soares^a, Marina Barros^a, Fábio Campos^a

^a Design Department, Federal University of Pernambuco, Brazil

Exergames: the role of ergonomics and design in helping to control childhood obesity through physical and functional exercise program

Marina Barros^a, André Neves^a, Walter Correia^a, Marcelo Soares^a

^aDesign Department, Federal University of Pernambuco, Brazil

Date: 14/02

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Time: 04:30 – 06:00pm

S-EinD 09 – Ergonomic Evaluation on Product Design 2

End users “Feedback” to improve ergonomic design of machinery

F.Strambi^{a,d}, M. Bartalini^a, S. Boy^b, R. Gauthy^{b,d}, R. Landozzi^a, D. Novelli^e and C. Stanzani^c

^aRegione Toscana, Italy ^bETUI, Belgium ^cSindNova, Italy ^dEUR ERG, Center for Registration of European Ergonomist ^eRegione Toscana, Gruppo Macchine, Italy

Comfort aspects important for the performance and safety of kitesurfing

Lina Lundgren^a, Sofia Brorsson^a and Anna-Lisa Osvalder^{a,b}

^aBiological and Environmental Systems, Halmstad University, Sweden ^bDivision of Design and Human Factors, Chalmers University of Technology, Sweden

A bus stop shelter evaluated from the user’s perspective

Vera Helena Moro Bins Ely^a, Jonara Machado de Oliveira^a and Louise Logsdon^a

^aTechnology Center, Federal University of Santa Catarina, Brazil.

Ergonomic basket design to reduce cumulative trauma disorders in tea leaf plucking operation

Bhattacharyya, N¹; Chakrabarti, D²

¹Assam Agricultural University, India ²Department of Design, Indian Institute of Technology, India

Ergonomic Evaluation of Conventional and Improved Methods of Aonla Pricking with Women Workers

Arpana Rai^a, Sudesh Gandhi^b and D.K.Sharma^c

^aDeptt. of Family Resource Management, COHS, CCSHAU, India ^bDeptt. of Family Resource Management, COHS, CCSHAU, India ^cDeptt. Of AP&FE, COA&E, CCSHAU, India.

Design and Technology in the Development of Potters’ Lathes for modeling with terracota: the case of Cabo de Santo Agostinho

Silva, G. D.A^a, Cordeiro, E. D.^a, Silva, A. C.R.^a, Andrade, A.Q.^a, Cavalcanti, V.P.^a

^aDepartment of Design, Federal University of Pernambuco, Brazil.

Date: 14/02

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S-EinD 10 Ergonomics and Fashion Design

Analysis and discussion of impact upon comfort and quality in fashion products based in ergonomics principles and clothing fit

Heinrich, D ; Carvalho, M ; Barroso, M

University of Minho – Portugal (site com o nome Brazil)

Ergonomics and Fashion: the OIKOS methodology for usability and comfort evaluation in clothing and fashion

Suzana Barreto Martins^a

^aState University of Londrina, Brazil

The conception of fashion products for children: reflections on safety parameters

PRETE, Lígia Gomes Pereira¹; EMIDIO, Lucimar de Fátima Bilmaia²; MARTINS, Suzana Barreto³

¹Design Department, Londrina State University, Brazil ²Design Department, Londrina State University, Brazil

³Design Department, Londrina State University, Brazil

Ergonomics analysis of the productive environment of fashion clothing firm in Belo Horizonte- MG

Andreia Salvan Pagnan^a, Jairo José Drummond Câmara^a

^aCPqD, State University of Minas Gerais, Brazil

Ergonomic work analysis of sewing machine operator at fashion industries in Rio de Janeiro city

Batista, A ; Souto, Y ; dos Santos, R ; Carvalho, R

Federal University of Rio de Janeiro – Brazil (na lista esta somente um nome)

Date: 14/02

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S-EinD 11 – Physical Demand on Ergonomic Design 1

Research on the Relationship between the Structural Properties of bedding layer in Spring Mattress and Sleep Quality

Liming Shen^a, Yu-xia Chen^{a,b}, Yong Guo^{a,b}, ShiLu ZHONG^a, Fei Fang^a,Jing Zhao^a and Tian-Yi Hu^a

^aNanjing Forestry University, China ^bAnhui Agricultural University, China

Biomechanics-based active control of bedding support properties and its influence on sleep

Van Deun D.^a, Verhaert V.^a, Willemen T.^a, Wuyts J.^b, Verbraecken J.^c, Exadaktylos V.^d, Haex B.^a and Vander Sloten J.^a

^aBiomechanics section, Catholic University of Leuven, Belgium ^bBiological Psychology, Vrije Universiteit Brussel, Belgium ^cMultidisciplinary Sleep Disorders Center, Antwerp University Hospital and University of Antwerp, Belgium ^dM3-BIORES, Katholieke Universiteit Leuven, Belgium

Study on resilience of mattress foam layer influencing on body pressure distribution characteristic

Zhu, Y ; Shen, L ; Song, J ; Sun, Y

College of Furniture and Industrial Design, Nanjing Forestry University – China

Analysis of ergonomics conditions of a brand of mattress and pillows.University-Industrie project, Medellín - Colombia

Luz Mercedes Sáenz Zapata, Ana María Lotero Arias, Emilio Cadavid Guzmán, Martha Arias de L. (não tem indicação de qual autor é que qual instituição)

^aErgonomics Research Division, Pontifical University Bolivariana, Colombia. ^bErgonomics Research Division, Pontifical University Bolivariana, Colombia. ^cPublic Company of Medellín, Colombia. ^dPontifical University Bolivariana, Colombia.

Body dimension measurements for pillow design for Taiwanese

Hsiao-Lin Chen* and Dengchuan Cai**

^aNational Yunlin University of Science and Technology, Taiwan ^bDepartment of Industrial Design, National Yunlin University of Science and Technology, Taiwan

Date: 14/02

Room: 09

Time: 04:30 – 06:00pm

S-EinD 12 – Physical Demand on Ergonomic Design 2

Technology and cognitive ability: the use of new technologies and the design of digital interfaces

Olavo Bessa^a

^aDepartment of Arts, Federal University of Rio Grande do Norte, Brazil

Comparison between static maximal force and handbrake pulling force

Chateauroux E.,^{a, b} and Wang X.^a

^aUniversity of Lyon, France ^bErgOptim, France

Stability of the relationships between hand position, body posture and risk assessment in dynamic repetitive hand-arm tasks (não está na outra lista)

Looze, M ; Könemann, R

Netherlands Organization for Applied Scientific Research – Netherlands

Movement strategy and performance in a high-volume order picking work station

Reinier Könemann^a, Tim Bosch^a and Michiel de Looze^{ab}

^aTNO, The Netherlands ^bHuman Movement Sciences, VU University, The Netherlands

A study of the kinematics of ingress and egress of upright and recumbent seats

Christopher Moore^a, Ashish Nimbarte^a, Sudhakar Rajulu^b, and Fereydoun Aghazadeh^c

^aWest Virginia University, USA ^bAnthropometry and Biomechanics Facility, Johnson Space Center, NASA, USA ^cDepartment of Construction Management & Industrial Engineering, Louisiana State University, USA

Ergonomics and design in a ischial support proposal for the Medellin Metro, Colombia

Luz Mercedes Sáenz Zapata, Andrés Valencia Escobar

Ergonomics Research Division, Pontifical University Bolivariana, Colombia

Date: 15/02

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Time: 01:00 – 02:30pm

S-EinD 13 – Ergonomic Evaluation of Tools Design

Ergonomic design intervention strategy for work tools development for women agro based workers in Northeast India

Debkumar Chakrabarti¹ and Nandita Bhattachheriya²

¹Department of Design, Indian Institute of Technology Guwahati, India ²Associate Professor, Assam Agricultural University, India

An Ergonomic Approach to Design Hand Tool for Agricultural Production

Mahendra Singh Khidiya^a, Awadhesh Bhardwaj^b

^aDepartment of Mechanical Engineering, Maharana Pratap University of Agriculture and Technology, India

^bDepartment of Mechanical Engineering, Malaviya National Institute of Technology, India

Redesign of the hand tool to reduce fatigue and possible DTA's in the module of a bakery donuts

Montoya, J

Technological Institute of Los Mochis – Mexico

A field experiment comparing mechanical demands of two pruners for flower cutting

Berio S^a, Barrero LH^a and Quintana LA^a

^aDepartment of Industrial Engineering, Pontifical University Javeriana, Colombia

Openability of soft drinks PET packagings

Danilo Corrêa Silva^a, Luis Carlos Paschoarelli^a and José Carlos Plácido da Silva^a

^aDepartment of Design, Paulista State University, Brazil

The use of thermal manikin to evaluate interface pressure distribution

Flavia Renata Dantas Alves Silva Ciaccia^a, Clenilson JordãoGonçalves^b, Laerte Idal Sznelwar^a

^aDepartment of Production Engineering, University of São Paulo, Brazil. ^bEmbraer S.A., Brazil.

Date: 15/02

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S-EinD 14 - Design for Special Population 1

The Hierarchy of Needs to Inclusive Design

Júlio Carlos de Souza van der Linden^a, Clariana Fischer Brendler^b

^aDepartment of Design and Graphic Expression, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brasil ^bPost Graduate Program in Design, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brasil

Designing from activities. The “Ability/Difficulty Table”, a useful tool to detect the “limit users” in the Design for All Approach

Giuseppe Di Bucchianico^a, Marco Gregori^a and Emilio Rossi^a

^aIDEA Department, University of Chieti-Pescara, Italy

“EWS Matrix” e “EWG Matrix”: “De-sign for All” Tools Referred to the Development of a Enabling Communication System for Public Spaces

Giuseppe Di Bucchianico^a, Stefania Camplone^a, Stefano Picchiani^a and Valeria Vallese^a

^aIDEA Department, University of Chieti-Pescara, Italy

Ergonomics and Design for All

Isabella Tiziana Steffan^a, Francesca Tosi^b

^a Studio Steffan – Design & Research, Italy ^bUniversity of Florence, Italy

The User Testing Toolset: A decision support system to aid the evaluation of assistive technology products

Andree Woodcock^a, Simon Fielden^b and Richard Bartlett^a

^aDepartment of Industrial Design, Coventry School of Art and Design Coventry University, UK ^bHealth Design Technology Institute, Coventry University, UK

Auxiliary locomotion device to unload lower limbs, using user’s own secondary support.

Eduardo. J. W. Alves, Leandro. E. V. Melo, Sérgio. J. Silva, Jairo J. D. Câmara

CEMA/LAB- Laboratory of Sensory and ergonomic Studies – University of the State of Minas Gerais – Brazil

Date: 15/02

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S-EinD 15 Ergonomics and Accessibility

Evaluation of spatial accessibility around the university hospital of Santa Maria - RS

Brondani, S

Federal University of Santa Maria – Brazil

A Conceptual model for barrier free facilities planning

R.S.Bittencourt^a, L. B. de M. Guimarães^a

^aFederal University of Rio Grande do Sul, Brazil

Ergonomics issues in conceiving an accessible project.

Costa. A. L.^a Coura. P.V.^a, Gomes. M. M. A.^a, Peregrino. Y. R.^a, Sarmiento. B. R.^a, Sousa. R. A.^a

^aDepartment of Architecture, Federal University of Paraíba, Brazil

Accessibility and participatory ergonomics in workplaces and surrounding space

Rojas, C

Pedagogical and Technological University of Colombia – Colombia

Minimum housing spaces, flexibility and sustainability: a reflection on the basis of ergonomics intervention

Rayssa Cristiane Oliveira^a, Dr. Gleice Azambuja Elali^b

^aArchitect and Urbanist, Brazil. ^bFederal University of Rio Grande do Norte, Brazil.

Ergonomics and Accessibility for People with Visual Impairment in Hotels

Larissa Nascimento dos Santos^a, Ricardo José Matos de Carvalho^b

^aPost graduation programme in Production Engineering, Brazil ^bDepartment of Production Engineering, UFRN, Brazil

Date: 15/02

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S-EinD 16 – Ergonomics and the Built Environment

Change of the Layout of an Office of a Metallurgical Company: Simple Projects, Big Solutions

Luiz Carlos da Silva Duarte^a, Moacir Eckhardt^b and Giordano Paulo da Motta^c

^aAgency for Innovation and Technology - AGIT, Northwest Regional University of Rio Grande do Sul - UNIJUÍ, Brazil ^bIndustrial Technical College de Santa Maria – CTISM, Federal University of Santa Maria - UFSM, Brazil

^cDepartment of Engineering and Exact Sciences - DCEEg, Northwest Regional University of Rio Grande do Sul - UNIJUÍ, Brazil

Workplace aesthetics: impact of environments upon employee health as compared to ergonomics

Elisabet Schell¹, Tores Theorell², and Helena Saraste¹

¹Karolinska Institute, Department of Molecular Medicine and Surgery, Sweden ²Karolinska Institute, Center for Health Sciences Sweden ³Stress Research Institute Stockholm University, Sweden

Usability requirements for buildings: a case study on primary schools

Gabriella Duca^a

^a Department DICATA / LEAS Laboratory, University of Naples Federico II, Italy

Ergonomic evaluation of the environment: A case study in a control room of the hydroelectric sector

Christianne Soares Falcão^a, Marcelo Marcio Soares^b

^aFederal University of Pernambuco, Brazil ^bFederal University of Pernambuco, Brazil

Evaluating attributes concepts for Build Environment

Oliveira, Gilberto R¹., Mont'Alvão, Claudia²

¹Arts & Design Department, Pontifical Catholic University of Rio de Janeiro, Brazil ²Arts & Design Department, Pontifical Catholic University of Rio de Janeiro, Brazil

Ergonomic design of a Brazilian physiotherapy clinic

Farias, S ; Vidal, M ; Masculo, F

Federal University of Paraiba, Federal University of Rio de Janeiro – Brazil

Date: 15/02

Room: 09

Time: 02:30 – 04:00pm

S-EinD 17 – Ergonomics for the Automotive Industry

Development of objective discomfort evaluation indicators for a task-oriented motion using less constrained motion concept: application to automotive pedal clutching task

Pannetier Romain.^{a, b} and Wang Xuguang.^a

^aUniversity of Lyon, France ^bRenault SAS, Service Facteur Humain, France

Three experiments to support the design of lightweight comfortable vehicle seats

P. Vink^a, M. Franz^b, I. Kamp^{a, b}, R. Zenk^b

^aDelft University of Technology, The Netherlands ^bBMW AG, Germany

Relationship between occupant posture and seat interface pressure

Shi, X ; Paul, G ; Daniell, N ; Fraysse, F

University of South Australia - Australia

Multi-platform Experiment to Cross a Boundary between Laboratory and Real Situational Studies:

Experimental Discussion of Cross-Situational Consistency of Driving Behaviors

Terai, H.^{a, e}, Miwa, K.^a, Okuda, H.^{b, e}, Tazaki, Y.^b, Suzuki, T.^b, Kojima, K.^c, Morita, J.^d, Maehigashi, A.^a, and Takeda, K.^a

^aNagoya University, Japan ^bNagoya University, Japan ^cWaseda University, Japan ^dJapan Advanced Institute of Science and Technology, Japan ^eJapan Science and Technology Agency, Japan

Ergonomic Evaluation of Interior Design of Shoka Vehicle and Proposing Recommendations for Improvement

Mazloumi, Adel^a, Fallah Mohammadreza^b

^aDepartment of Occupational Health, Tehran University of Medical Sciences, IRAN ^bDepartment of Ergonomics, Rehabilitation and Welfare University, Iran,

Adoption of ergonomic features in a new reach truck cabin design – A usability study

Maral Babapour^a, Anna-Lisa Osvalder^a, and Lars-Ola Bligård^a

^aDepartment of Product and Production Development, Chalmers University of Technology, Sweden.

Date: 15/02

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Time: 04:30 – 06:00pm

S-EinD 18 - Ergonomics, Design and Innovation

Experimenting new design languages in contemporary home design

Francesca Tosi^a, Alessandra Rinaldi^b

^aUniversity of Florence, Italy ^bSpring Design®, Italy

The Intermodal Bike: multi-modal integration of cycling mobility through product and process innovations in bicycle design

Francesca Tosi^a, Alessandro Belli^b, Alessandra Rinaldi^c, Grazia Tucci^d

^aUniversity of Florence, Italy ^bTecnologie Urbane Srl, Italy ^cSpring Design®, Italy ^dUniversity of Florence, Italy

Ergonomic and usability analysis on a sample of automobile dashboards

Raíssa Carvalho^a, Marcelo Soares

^aDepartament of Design - UFPE, Brazil ^bDepartament of Design, Federal University of Pernambuco, Brazil

Towards the Application of Interaction Design to Digital TV Content Development

Anelise Thaler^a, Paloma Maria Santos^a, Marcus de Melo Braga^a and Francisco A. P. Fialho^a

^aFederal University of Santa Catarina, Brazil

Interface design and contemporary human creating new guidelines for high-tech products

Andreia Salvan Pagnan^a, Giovana Freitas Rabelo Ribeiro^a, Maria Goretti Souza Gonçalves^a, Jairo José

Drummond Câmara^a, Sandra Motta Baptista^a

^aCPqD, State University of Minas Gerais, Brasil

An ergonomic study on the navigation structure and information units of websites with multimedia content. A case study of the Xbox 360 promotional website

Eduardo ARIEL^a and Anamaria de MORAES^b

^aSchool of Advertising and Marketing – ESPM-RJ, Brazil ^b Pontifical Catholic University of Rio de Janeiro, PUC-RIO, Brazil

Date: 16/02

Room: 08

Time: 01:00 – 02:30pm

S-EinD 19 – Ergonomics and Information Design

Urban Ergonomics: an ongoing study of city signs and maps

Patricia Alves^a and Pedro Arezes^a

^aDepartment of Production and Systems, University of Minho, Portugal

Ergonomics and Design: Traffic Sign and Street Name Sign

Janaina Luisa da Silva Moroni^a and José Luís Farinatti Aymone^b

^aDepartment of Design and Graphic Expression, Federal University of Rio Grande do Sul, Brazil.

^bDepartment of Design and Graphic Expression, Federal University of Rio Grande do Sul, Brazil.

A brief essay on ergonomics in graphic design

André Noronha Furtado de Mendonça^a, Júlio Carlos de Souza van der Linden^b and Tania Mara Galli Fonseca^c

^aFederal University of Rio Grande do Sul, Brazil ^bDepartamento de Design e Expressão Gráfica, Universidade Federal do Rio Grande do Sul, Brazil ^c Federal University of Rio Grande do Sul, UFRGS, Brazil

Informational Ergonomics and Design: Signage Design for Monte Sião Camp

Marques, Luiz Guilherme Oliveira^a, Cardoso, Vânia Maria Batalha^b

^aFederal University of Amazon, Brazil. ^bDesign and Graphic Expression Department, Federal University of Amazon, Brazil.

Analyzing Web pages visual scanpaths:

between and within tasks variability

Gautier Drusch^a and J. M. Christian Bastien^a

^aDepartment of Psychology, University Paul Verlaine – France

Web Accessibility: Evaluation of a
Website with Different Semi-automatic Evaluation Tools
Edson Rufino de Souza^{a,b} and Cláudia Mont'Alvão^a

^aErgonomics Laboratory, Arts and Design Department, Pontifical Catholic University of Rio de Janeiro, PUC-
Rio, Brazil ^bNational Institute of Industrial Property, Brazil

Area – Ergonomics in Manufacturing

Chair: Sheue-Ling Hwang, National Tsing-Hua University - Taiwan

Date: 14/02

Room: 03

Time: 01:00 – 02:30pm

S-EinM 01 - Ergonomics in Manufacturing 1

Chair: Gempur Santoso, M.Kes, University of PGRI Adi Buana Surabaya

Co-Chair: Arabi, H, PSA Peugeot Citroen, Ergonomics, Ergonomie – France

FATIGUE DETECTION ON STANDING POSITION OF DOING LATHE MACHINE TOWARDS LACTATE ACID AND
GLUCOSE CONCENTRATES

Prof. Dr. Gempur Santoso, M.Kes.

University of PGRI Adi Buana Surabaya

Protocols of mechanical force measurements during tasks in real work situation with a dynamometer

Arabi, H ; Morais, A ; Kapitaniak, B ; Buttelli, O

PSA Peugeot Citroen, Ergonomics, Ergonomie – France (nome instituicao)

The effect of Job Rotation intervals on muscle fatigue – Lactic acid

Filus, Msc Rodrigo*, Okimorto, Phd. Maria Lucia

*Mechanical Engineering Department – PGMEC - UFPR. Brazil. ^bProduction Engineering Department –
Ergonomic Lab- UFPR - Brazil

Members of the human body prone to musculoskeletal damages: a comparison between the sector of
transportation and footwears production

Gomes de Lima, Jeane F., Colaço, Geraldo, da Silva, Ricardo and Masculo, Francisco

Department of Production Engineering, Federal University of Paraíba, Brazil.

Impact of hand forces and start/stop frequency on physiological responses to three forms of pushing and
pulling: A South African perspective

Todd AI^a

^aDepartment of Human Kinetics and Ergonomics, Rhodes University, South Africa

Needs of ergonomic design at control units in production industries

Levchuk I, Schäfer A, Lang K-H, Gebhardt Hj and Klussmann A

Institute of Occupational Health, Safety and Ergonomics (ASER), Germany

Date: 14/02

Room: 03

Time: 02:30 – 04:00pm

S-EinM 02 - Ergonomics in Manufacturing 2

Chair: Mateus Junior, J, Federal University of Santa Catarina – Brazil

Co-Chair: Caceres Francisco, University of Las Americas - Ecuador

Cognitive Ergonomics: The Use Of Mind Mapping Tool In Maintaining Productive Sector Of A Brazilian Paper Company

Mattos, Diego^a, Mateus Junior, José Roberto^a and Merino, Eugenio^a

^aFederal University of Santa Catarina, Brazil

Integrating ergonomics assessments methods and lean manufacturing A3 method: the case of a corrugated sheet industry in Brazil

Mateus Junior, J ; de Mattos, D ; Merino, E

Federal University of Santa Catarina – Brazil

Ergonomics a noise committee in a pulp and paper industry

Mateus Junior, J ; de Mattos, D ; Merino, E ; Federle, V

Federal University of Santa Catarina – Brazil

ANALYSIS OF THE THERMAL COMFORT MODEL IN AN ENVIRONMENT OF METAL MECHANICAL BRANCH

Pinto, N. M.¹, Xavier, A.A.P.², Regiane T. do Amaral³

¹Federal Institute of Espírito Santo, Brazil ²Federal Technological University of Paraná, Department of Engineering Production - Brazil ³Federal Institute of Espírito Santo, Brazil

Ergonomic analysis in cold storage rooms: A Study of Case

da Silva, Hebert Roberto^a, de Araújo, Cleudmar Amaral^b

^aUnivesity of Mato Grosso, Brazil. ^bFederal University of Uberlandia, Brazil.

Implementation of an ergonomics program for the welding department inside a car assembly company

Caceres Francisco^a, Troya Edwin^b

^aUniversity of Las Americas, Ecuador ^bUniversity of Las Americas, Ecuador

Date: 14/02

Room: 03

Time: 04:30 – 06:00pm

S-EinM 03 - Ergonomics in Manufacturing 3

Chair: Kimberly Monroe, KM Ergonomics, LLC – USA

Co-Chair: Luis A. Saavedra-Robinson, Pontifical University Javeriana - Colombia

Successful Integration of Ergonomics into Continuous Improvement Initiatives

Kimberly Monroe, Ph.D., CPE^a, Faye Fick, MS, OTR/L^b and Madina Joshi, MS, CPE^c

^aKM Ergonomics, LLC, USA ^bWorksite Therapies and Consulting Services, USA ^cEnvironmental Health / Safety Corporate Ergonomics, USA

Investigating the effects of physical and cognitive demands on the quality of performance under different pacing levels

S. Shaikh^a, S. V. G. Cobb^a, D. Golightly^a, J. I. Segal^b and C. M. Haslegrave^a

^aHuman Factors Research Group, University of Nottingham, UK ^bManufacturing Research Division, University of Nottingham, UK

DMAICR in an Ergonomic Risks Analysis

Santos, E.F^a, Lima, C.R.C^b

^aAEDU, Anhanguera Educacional, Department of Automation & Control Engineering, Brazil ^bUNIMEP, Methodist University of Piracicaba, Department of Industrial Engineering, Brazil

Analysis of the lifted weight including height and frequency factors for workers in Colombia

Luis A. Saavedra-Robinson ^a, Leonardo A Quintana J ^a, Fortunato Leal, Luis Díaz ^a and María Niño ^a

^aDepartment of Industrial Engineering, Pontifical University Javeriana, Colombia

Predictors of leaving employment at manufacturing companies: results from a prospective cohort study

Kapellusch, J ; Garg, A ; Hegmann, K

University of Wisconsin, University of Utah – USA

Analysis of the workload imposed on the workers of the Imprint and Cutting/Welding sectors of a flexible packaging manufacturer

L. B. de M. Guimarães ^a, S.L.R. Pessa^b and C. Biguelini^a

^aGraduate Program in Industrial Engineering, Federal University of Rio Grande do Sul, Brazil ^b Department of Mechanical Engineering, Federal Technological University of Paraná, Brazil

Date: 15/02

Room: 03

Time: 01:00 – 02:30pm

S-EinM 04 - Ergonomics in Manufacturing 4

Chair: Marcello Silva e Santos, University Complex of Volta Redonda – Brazil

Co-Chair: S.L.R. Pessa, Federal Technological University of Paraná - PR

The RFad Method – A new Fatigue Recovery Time Assessment for Industrial Activities

Marcello Silva e Santos^a, Mario Cesar Rodriguez Vidal ^b and Sergio Bastos Moreira ^c

^aIndustrial Engineering Department, UNIFOA, University Complex of Volta Redonda, Brazil, ^bGENTE/COPPE Ergonomics Laboratory – Federal University of Rio de Janeiro, Brazil ^c Physiology Department, UNIFA, Air Force University, Brazil

Noise analysis in professional office chairs

ALVES, E. J. W., Filho, J. N., SILVA, S. J., CÂMARA, J. J. D.

CEMA/LAB - Laboratory of Sensory and ergonomic Studies – University of the State of Minas Gerais – Brazil

The risk of developing repetitive stress injury in seamstresses, in the clothing industry, under the perspective of ergonomic work analysis: A case study.

Melo Junior, A. S.

Superintendência Regional do Trabalho na Paraíba, Ministério do Trabalho e Emprego, Brazil

The Regulation of Work Activity and the New Labor and Production Contexts

Elaine Cristina Silva^a, Paulo Eduardo Gomes Bento^b

^aIndustrial Engineer Department, Federal University of São Carlos, Brazil. ^bIndustrial Engineer Department, Federal University of São Carlos, Brazil.

The footwear factory's assembly sector: opposing organizational structure and quality from the ergonomic work analysis

Kláudia M. M. N. Silva^a, Bernardo G. P. Coelho^b, Josemir V. S. Junior^b, Luiz F. M. Faria^b, Ludmila Dutra^b, Marília Alvarenga^b, Renan Roggini^b and Eliza Helena de Oliveira Echternach^b

^aProduction Engineering Department, Federal University of Minas Gerais, Brazil ^bProduction Engineering Department, Federal University of Minas Gerais, Brazil.

Evaluation of the impact of shiftwork and chronotype on the workers of the Imprint and Cutting/Welding sectors of a flexible packaging manufacturer

L. B. de M. Guimarães^a, S.L.R. Pessa^b, C. Biguelini^a

^a^cFederal University of Rio Grande do Sul, Brazil ^bDepartment of Mechanical Engineering, Federal Technological University of Paraná, PR

Date: 15/02

Room: 03

Time: 02:30 – 04:00pm

S-EinM 05 - Ergonomics in Manufacturing 5

Chair: Dino Bortot, Technische Universität München – Germany

Co-Chair: Sara Figueira, New University of Lisbon - Portugal

Human motion behavior while interacting with an industrial robot

Dino Bortot^a, Hao Ding^b, Alexandros Antonopolous and Klaus Bengler^a

^aInstitute of Ergonomics, Technische Universität München, Germany ^bControl and System Theory, University of Kassel, Germany

Ergonomics in the formation of work condition quality

Adam Górný

Poznan University of Technology, Department of Management Engineering, Poland

The key to success in ergonomic interventions

Delaruelle, D

Mensura EDPB - Belgium

Integration of human factors principles in LARG organizations – a conceptual model

Sara Figueira^a, V. Cruz Machado^{a,b} and Isabel L. Nunes^{a,c}

^aDepartment of Mechanical and Industrial Engineering, New University of Lisbon, Portugal ^bResearch Unit in Mechanical and Industrial Engineering, New University of Lisbon, Portugal ^cCenter of Technology and Systems, New University of Lisbon, Portugal

Production layout improvement in emergency services: a participatory approach

Mateus Zanatta^a, Fernando Gonçalves Amaral^a

^aProducts and Processes Optimization Lab, Federal University of Rio Grande do Sul, Brazil.

Ergonomic analysis of workplaces in the iron casting industrial pole in claudio, minas gerais / brazil

Artur Caron Mottin^a, Carlos Alberto Silva de Miranda^a, Caroline Salvan Pagnan^a and Olavo Pena Monken^a

^aCDE, State University of Minas Gerais, Brazil

Date: 15/02

Room: 03

Time: 04:30 – 06:00pm

S-EinM 06 - Ergonomics in Manufacturing 6

Chair; Mikael Forsman, Karolinska Institute – Sweden

Co-Chair: Erminia Attaianese, University of Naples Federico II - Italy

The integrated assessment of occupational risks in a pharmaceutical manufacturing plant
Erminia Attaianese ^a and Gabriella Duca ^a

^a Department DICATA/LEAS, University of Naples Federico II, Italy

Ergonomic evaluation of processes and products in the manufacture of upholstery

Patrícia Bhering Fialho, D.S.^a, Amaury Paulo de Souza, Ph.D.^b, Luciano José Minette, D. S.^c, José de Castro Silva D. S.^d, Luciana Aparecida de Oliveira, B.S. in Home Economics^e

^aFederal Center of Technological Education of Minas Gerais - CEFETMG, Brazil ^{b,c,e}Forest Engineering Department, Federal University of Viçosa, Brazil. ^dForest Engineering Department, Federal University of Viçosa, Brazil

Evaluation of a socio-technical intervention in the Brazilian footwear according to the workers point of view

Renner, J ; Guimarães, L ; Oliveira, P

Federal University of Rio Grande do Sul - Brazil

A Socio-technical approach for improving a Brazilian shoe manufacturing system

J. S. Renner ^a, L. B. de M. Guimarães ^b and P. A. B. de Oliveira ^c

^aInstitute of Health Sciences, Feevale University, Brazil ^bFederal University of Rio Grande do Sul, Brazil ^cDepartment of Health, Federal University of Rio Grande do Sul, Brazil

Participative development of packages in the food industry – evaluation of ergonomics and productivity by objective measurements

Mikael Forsman^{a,b}, Eva Bernmark^a, Birgitta Nilsson^c, Sandra Pousette^c, Svend Erik Mathiassen^b

^aDepartment of Public Health Sciences, Karolinska Institute, Sweden. ^bDepartment of Occupational and Public Health Sciences, University of Gävle, Sweden ^cInnventia AB, Sweden

Ergonomics and Kaizen as strategies for competitiveness: a theoretical and practical in an automotive industry

Leandro VIEIRA^a, Giles BALBINOTTI^b, Adriano VARASQUIN^c and Leila GONTIJO^d.

^aFederal University of Santa Catarina, Brazil. ^bFederal University of Santa Catarina, Brazil. ^cPontifical Catholic University of Paraná, Brazil. ^dFederal University of Santa Catarina, Brazil.

Date: 16/02

Room: 08

Time: 02:30 – 04:00pm

S-EinM 07 - Ergonomics in Manufacturing 7

Chair: André S. Salles, Loughborough University - United Kingdom

Co-Chair: Yanes Escalona, L, University of Carabobo - Venezuela

Modified track shoes and their effect on the EMG activity of calf muscles

Marlon Greensword, Fereydoun Aghazadeh, and Saif Al-Qaisi

Department of Construction Management and Industrial Engineering, Louisiana State University Baton Rouge, USA

The specification of personalised insoles using additive manufacturing

André S. Salles^a and Diane E. Gyi^a

^aLoughborough Design School, Loughborough University, United Kingdom

The Reality of the Women who Make our Lives Easier: Experience in a Company that Assembles Electric Motors in Venezuela.

Yanes Escalona, L¹; Sandia Venot, R¹; Escalona, E¹; Yanes, L²

¹Department of Public Health, University of Carabobo, Venezuela. ²Autonomous Service Institute of Higher Studies "Dr. Arnoldo Gabaldon", Ministry of Popular Power for Health, Venezuela.

State of scientific knowledge about the need of recovery time at specific workplaces and recommendations for further research

Mühlemeyer, C^a, Klusmann, A^a, Gebhardt, H^a and Lang, KH^a

^aInstitute of Occupational Health, Safety and Ergonomics (ASER), Germany

Software Development for the Evaluation of the Ergonomic Compatibility on the selection of Advanced Manufacturing Technology

Maldonado-Macías, A^{a,b}, Reyes, R.^b, Guillen, L^a and García, J^a

^aDepartment of Industrial and Manufacturing Engineering, Ciudad Juárez Autonomous University, Mexico

^bCiudad Juárez Institute of Technology, Mexico

Construction of a survey to assess workload and fatigue among AMT operators in Mexico

Juan Luis Hernández Arellano^a, Gabriel Ibarra Mejía^a, J Nieves Serratos Pérez^b, Jorge Luis García Alcaraz^a, María Julia Brunette^c

^aAutonomous University of Ciudad Juárez, Mexico. ^bDepartment of Applied Science to Work, University of Guanajuato, Mexico ^cWork Environment Department, University of Massachusetts Lowell, USA

Area – Healthcare Ergonomics

Chair: Dr. Richard H.M. Goossens, Delft University of Technology - The Netherlands

Date: 13/02

Room: 10

Time: 01:00 – 02:30pm

S-HEALTH 01 - SYSTEMS APPROACH TO HEALTHCARE

FUZZY MODELLING AND EFFICIENCY IN HEALTH CARE SYSTEMS

Ahmet F. Ozok

Industrial Engineering Department, Istanbul Culture University, TURKEY

Using Human Factors Engineering to Improve Patient Safety in the Cardiovascular Operating Room

Ayşe P. Gurses^{a,b,c}, Elizabeth A. Martinez^d, Laura Bauer^a, George Kim^b, Lisa H. Lubomski^a, Jill A. Marsteller^{a,c}, Priyadarshini R. Pennathur^a, Chris Goeschel^{a,c,e}, Peter J. Pronovost^{a,c,e} and David Thompson^{a,e}

^aDepartment of Anesthesiology and Critical Care Medicine, Johns Hopkins University School of Medicine, USA. ^bDivision of Health Sciences Informatics, Johns Hopkins University School of Medicine, USA.

^cDepartment of Health Policy and Management, Bloomberg School of Public Health, USA. ^dMassachusetts General Hospital, Harvard University, USA ^eThe Johns Hopkins School of Nursing, USA.

Workaround identification as an instrument for work analysis and design: a case study on ePrescription

Polyxeni Vassilakopoulou¹, Vassilis Tsagkas and Nicolas Marmaras

Ergonomics Unit, National Technical University of Athens, Greece

Characterizing complexity in socio-technical systems: a case study of a SAMU Medical Regulation Center

Angela Weber Righi^a, Priscila Wachs^b and Tarcísio Abreu Saurin^b

^{a,b}Industrial Engineering and Transportation Department, Federal University of Rio Grande do Sul, Brazil

Examination of computer task exposures in radiologists: A work systems approach

Michelle M. Robertson^a, Philip Boiselle^b, Ronald Eisenberg^b, Dainel Siegal^b, Che-Hsu (Joe) Chang^c, Marvin Dainoff^a, Angela Garabet^a, Jennifer Bruno Garza^c and Jack Dennerlein^{cd}

^aLiberty Mutual Research Institute for Safety, USA ^bBeth Israel Deaconess Hospital Medical Center, USA

^cHarvard School of Public Health, USA ^dHarvard Medical School, Boston, USA

Ergonomic assessment among Radiology Technologists: a survey in a hospital

Pais, Fernando Lima^a; Azevedo, Paulo Roberto^b; Medeiros, Lícia Helena de Oliveira^c, Freitas, Iraí Borges de^d e Stamato, Cláudia^e.

^aPontifical Catholic University of Rio de Janeiro, PUC- Rio; ^bPontifical Catholic University of Rio de Janeiro, PUC- Rio; ^cCatholic University of Brasília, UCB; ^dENSP-FIOCRUZ; ^ePontifical Catholic University of Rio de Janeiro, PUC- Rio

Date: 13/02

Room: 10

Time: 02:30 – 04:00pm

S-HEALTH 02 - ORGANIZATIONAL ERGONOMICS IN HEALTHCARE 1

Care Giving and nursing, work conditions and Humanity[®]

Sylvain Biquand^a, Benoit Zittel^b

^aAbilis ergonomie, France ^bAnthropie, France

Ergonomics in the psychiatric ward towards workers or patients?

Salerno Silvana^a, Forcella Laura^b, Di Fabio Ursula^b, Figà Talamanca Irene^c, Boscolo Paolo^b,

^aENEA Casaccia, Division of Biomedicine, Italy ^bOccupational Health, University of Chieti ^cUniversity of Rome, Italy

Impact of ergonomics risk among workers in clothes central distribution service in a hospital

D. A. Sacouche, L.C. Morrone and J.S. Silva-Júnior

Department of Social Medicine, Santa Casa Medical Sciences School, Brazil

Impact of work organization in health and safety of nursing techniques in intensive care unit

Marçal, M ; Mazzoni, C

Federal University of Health Sciences of Porto Alegre, FUMEC University - Brazil

Participatory work improvement training for promoting good health care practices in Burundi

Yoshikawa, T ; Kogi, K ; Pascal, N

Institute for Science of Labour, Le Directeur du Bureau Provincial de Santé de la Mairie de Bujumbura, Burundi – Japan

Date: 13/02

Room: 10

Time: 04:30 – 06:00pm

S-HEALTH 03 - ORGANIZATIONAL ERGONOMICS IN HEALTHCARE 2

Professional Competencies of nurses in a basic healthcare center of Belo Horizonte

Machado, A

Pythagoras Faculty – Brazil

An Ergonomic Analysis of Work in the Process of Professional Rehabilitation in Brazil

Cabral, A.^a; Souza e Silva, M.^b; Louzada, E.^c and Cesar, W.^c

^aDepartment of Occupational Therapy, Federal University of Pernambuco, Brazil. ^bFederal University of Pernambuco, INSS – National Institute of Social Insurance, Brazil. ^cDepartment of Occupational Therapy, Federal University of Pernambuco, Brazil

Ergonomic constraints among nursing workers in the sectors of emergency care in two public hospitals in Brazil

Maria Goreth Bandeira^a, Raimundo Lopes Diniz^b and Ana Hélia Sardinha^c

^aFederal University of Maranhão, Brazil ^bDepartment of Design and Technology, Federal University of Maranhão, Brazil ^cDepartment of Nursing, Federal University of Maranhão, Brazil

Injury Prevention in Physiotherapists - A Scientific Review

Deepak Sharan¹, Ajeesh PS¹.

¹RECOUP Neuromusculoskeletal Rehabilitation Centre, India

Musculoskeletal disorder related to the work of doctors who perform medical invasive evaluation

D.P. Maciel, R.A.M. Millen, C.A. Xavier, L.C. Morrone and J.S. Silva-Júnior

Department of Social Medicine, Santa Casa Medical Sciences School, Brazil

Date: 14/02

Room: 10

Time: 01:00 – 02:30pm

S-HEALTH 04 - PHYSICAL ERGONOMICS IN HEALTHCARE

Work-related musculoskeletal discomfort and injuries in Australian optometrists

Jennifer Long^a, Robin Burgess-Limerick^b and Fiona Stapleton^a

^aUniversity of New South Wales, Australia ^bUniversity of Queensland, Australia

Effect of tool handle design among dental practitioners: a randomized controlled trial

Rempel, D ; Lee, D ; Dawson, K ; Loomer, P

University of California – USA

Risk reduction in musculoskeletal practice assistance professional nursing Pilot in semi intensive care unit

Lemo A, Silva A G, Tucherman M, Talerman C, Guastelli R L e Borba C L

Centre for Occupational Health, Albert Einstein Hospital Israeli Brazilian Benefit Society, Brazil

Identification of ergonomic risks due to postural load on operative dentistry activity

la Teja, G ; Leon, G

National Autonomous University of Mexico, Social Security Institute of Mexico State and Municipalities – Mexico

Factors contributing to work related low back pain among Personal Care Workers in old age

Simon S. Yeung

Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hong Kong

Ergonomic evaluation of laparoendoscopic single-site surgery ports in a validated laparoscopic training model

Bernadette McCrory^a, Bethany R. Lowndes^a, Laura M. Wirth^a, Adam E. de Laveaga^a, Chad A. LaGrange^b and M. Susan Hallbeck^a

^aDepartment of Industrial and Management Systems Engineering, University of Nebraska-Lincoln, USA.

^bDepartment of Surgery, University of Nebraska Medical Center, USA

Date: 14/02

Room: 10

Time: 02:30 – 04:00pm

S-HEALTH 05 - PHYSICAL ERGONOMICS IN HEALTHCARE

Musculoskeletal Disorders in Caregivers of Children with Cerebral Palsy Following a Multilevel Surgery

Deepak Sharan¹, Ajeesh PS¹, Rameshkumar R¹, Manjula.M¹

¹RECOUP Neuromusculoskeletal Rehabilitation Centre, India.

PREVENTIVE AND CURATIVE IMPORTANCE OF THE BAROPODOMETRIC ANALYSIS FOR THE ERGONOMICS AND OCCUPATIONAL HEALTH

Vélez V. Martha Kenny^a, Nolivos Verónica^b, Alegría Fabricio^c.

^aUniversity of las Américas, Ecuador ^bUniversity of las Américas, Ecuador ^cUniversity of las Américas, Ecuador

ERGONOMIC AND INDIVIDUAL RISK EVALUATION

Vélez V. Martha Kenny^a, Nolivos Verónica^b, Alegría Fabricio^c.

^aUniversity of Las Américas, Ecuador; ^bUniversity of Las Américas, Ecuador ^cUniversity of Las Américas, Ecuador

A study of task related fatigue amongst nurses in South African hospitals

Elliott , A

Rhodes University - South Africa

Recognizing nurse stakeholder dissonance as a critical determinant of patient safety in new healthcare information technologies

Elizabeth A. Samaras, Sara D. Real, Amber M. Curtis and Tessa S. Meunier

Department of Nursing, Colorado State University-Pueblo, US

How are Nurses at Risk?

Elizabeth (Lizzy) M Smith

^a Airservices Australia

Date: 14/02

Room: 10

Time: 04:30 – 06:00pm

S-HEALTH 06 - PHYSICAL ERGONOMICS IN HEALTHCARE: MANUAL HANDLING

Screening of risk from patient manual handling with MAPO method

Natale Battevi^{*}, and Olga Menoni^{*}

^{*}Department of Occupational Health" Clinica del Lavoro L. Devoto" University of Milan - Italy

Definition of design criteria of mechanical transfer: an interaction between engineering and health areas
Taciana Ramos Luz^a, Eliza Helena de Oliveira Echternacht^b

^aDepartment of Production Engineering, Federal University of Minas Gerais – Brazil. ^bDepartment of Production Engineering, Federal University of Minas Gerais – Brazil.

BIOMECHANICAL AND ORGANIZATIONAL RISK AND PREVALENCE OF LOW BACK PAIN IN THE OLD ADULTS CAREGIVERS OF A NURSING HOME IN JOAO PESSOA / PB.

Sânzia Bezerra Ribeiro ^a, Maria Claudia Gatto Córdia ^b, Lais Cristina Almeida ^c

^aAdventist College of Bahia ^bFederal University of Paraiba ^cBrazilian School of Osteopathy

Study of Musculoskeletal Risks of the Office-Based Surgeries

James E. Hermanson, and Sang D. Choi, Ph.D., CSP, CPE

Department of Occupational & Environmental Safety & Health, University of Wisconsin – USA.

Quantitative posture analysis of 2D, 3D, and optical microscope visualization methods for microsurgery tasks

Yu, Denny^a, Michael Sackllah^a, Charles Woolley^a, Steven Kasten^b, and Thomas Armstrong^a

^aCenter for Ergonomics, University of Michigan, USA, ^bDepartment of Surgery, University of Michigan, USA

Date: 15/02

Room: 10

Time: 01:00 – 02:30pm

S-HEALTH 07 - PATIENT SAFETY AND QUALITY OF HEALTHCARE

Reducing latent errors, drift errors, and stakeholder dissonance

GM Samaras

Samaras & Associates, Inc., US

Quality in radiotherapy: effective treatment and patient safety

Adelaide Nascimento, Pierre Falzon

Research Center on work Development (CRTD) - National Conservatory of Arts and Crafts, France

A Comparative Study of Occupancy and Patient Care Quality in Four Different Types of Intensive Care Units in a Children's Hospital

Thomas J. Smith

School of Kinesiology, University of Minnesota, USA

Interventions to prevent needle stick injuries among health care workers

Henk F. van der Molen^a, Koos AH Zwinderman^b, Judith K. Sluiter^a, Monique H.W. Frings-Dresen^a

^aCoronel Institute of Occupational Health, Academic Medical Center, University of Amsterdam, The Netherlands ^bClinical Epidemiology and Biostatistics, University of Amsterdam, The Netherlands

Managing unforeseen events in anesthesia: collective trade-off between “understanding” and “doing”

L. Cuvelier^a, P. Falzon^b, J.C. Granry^c and M.C. Moll^c

^aCentre for Employment Studies (CEE), Centre for Research and Studies on the age and people at work (Créapt) ^bCenter for research on work and development (CRTD), France ^cUniversity Hospital of Angers, France

Date: 15/02

Room: 10

Time: 02:30 – 04:00pm

S-HEALTH 08 - SPECIAL TOPICS IN HEALTHCARE 1

RELATION BETWEEN PERCEIVED AND ACTUAL FORCE IN A SIMULATED DENTAL TASK

Gnaneswaren, V, and Bishu, R.R.

Department of Industrial Engineering, University of Nebraska, US

Improving wheelchair prescription: an analysis of user needs and existing tools

Louise Moody^a, Andree Woodcock^a, Mike Heelis^b, Cynthia Chichi^a, Simon Fielden^c,
Dimitar Stefanov^d

^aDepartment of Industrial Design, Coventry University, UK. ^bBirmingham Community Healthcare NHS Trust (BCHNT), UK ^cHealth Design & Technology Institute, Coventry University, UK. ^dCoventry University, UK.

Automatic sleep stage classification based on easy to register signals as a validation tool for ergonomic steering in smart bedding systems

Tim Willemen^a, Dorien Van Deun^a, Vincent Verhaert^a, Sandra Pirrera^b, Vasileios Exadaktylos^b, Johan Verbraecken^b, Bart Haex^b and Jos Vander Sloten^b

^aDivision of Biomechanics, Catholic University Leuven, Belgium ^bBiological Psychology, Vrije Universiteit Brussel, Belgium ^cM3-BIORES, Catholic University Leuven, Belgium ^dMultidisciplinary Sleep Disorders Center, Antwerp University Hospital and University of Antwerp, Belgium

The impacts of painful noise in the apprehension of sound references on context of a Big Band

Taciana Ramos Luz^a, Eliza Helena de Oliveira Echernacht^b

^aDepartment of Production Engineering, Federal University of Minas Gerais, Brazil. ^bDepartment of Production Engineering, Federal University of Minas Gerais, Brazil.

Horizontal plane sound source localization and auditory enhancement

Jan R. Smith^a, Wesley R. Lombard^a and Moses N. Shaba^a

^aErgonomics Technologies, South Africa

Moral Harassment of Public Schools Teachers

Izabel Carolina Martins Campos^{ab}, Alessandra da Cruz Serafim^b, Kamilla Valler Custódio^b,
Lizandra da Silva^a and Roberto Moraes Cruz^a

^aFederal University of Santa Catarina - UFSC, Brazil ^bState Secretary of Administration's Office, Brazil

Date: 15/02

Room: 10

Time: 04:30 – 06:00pm

S-HEALTH 09 - SPECIAL TOPICS IN HEALTHCARE 2

The 'urge to move' on body supports

R.H.M. Goossens^{a,b}

^aDepartment of Applied Ergonomics and Design, Delft University of Technology, The Netherlands

^bDepartment of Neuroscience, Erasmus MC, The Netherlands

Kinematic analysis of post office employees' work stations

Francesco Draicchio^a, Alessio Silveti^a, Federico Forzano^a, Sergio Iavicoli^a and Alberto Ranavolo^a

^aDepartment of Occupational Medicine, Italy

Accessibility of sports facilities for persons with reduced mobility and assessment of their motivation for practice

Maria Manuel Sá^a, Rui Azevedo^b, Maria Cristina Martins^a, Osvaldo Machado^b, João Tavares^b

^a CIDESD – ISMAI, Instituto Superior da Maia ^b CATST– ISMAI, Instituto Superior da Maia, Portugal

Hand Therapy and Ergonomics: Integration of Approaches in Vocational Rehabilitation and Promotion of Decent Work in Brazil

Thaís Tosetto^a, Flávia Giuntini Orsi^b

^aIndustrial Engineer Department, Federal University of São Carlos, Brazil. ^bDepartment of Occupational Therapy, Padre Anchieta University Center, Brazil.

Effects of wearing a pressure redistribution belt while lying in a hospital bed

François Fraysse^a, Nathan Daniell^a and Gunther Paul^a

^aErgolab, Mawson Institute, University of South Australia, Australia

Design of an Ergonomic Ultrasound System: Accommodation of User Anthropometrics

Sung Park, Jinho Yim and Goeun Lee

User Experience Design Group, Digital Media & Communications R&D Center, Samsung Electronics

Date: 16/02

Room: 10

Time: 01:00 – 02:30pm

S-HEALTH 10 - SPECIAL TOPICS IN HEALTHCARE 3

Weight gain in relation to night work among nurses

Elaine C Marqueze^a, Lucia C Lemos^a, Nilson Soares^a, Geraldo Lorenzi-Filho^b, Claudia R C Moreno^a

^aDepartment of Environmental Health, University of São Paulo, Brazil ^bInstituto do Coração - InCor – University of São Paulo, Brazil

Relationship between exposure to cement and the incidence of respiratory diseases in children: a preventive perspective

Borba, A¹; Santos, A¹; Santos, Y¹ and Porto, F²

¹UNIPÊ, University Center of João Pessoa, Brazil ²UFPB, Federal University of Paraíba, Brazil

Quick Exposure Check (QEC): a cross-cultural adaptation into Brazilian-Portuguese

Maria Luiza C.Comper^{a,b}, Leonardo O.P. Costa^{b,c} and Rosimeire S. Padula^b

^aMetropolitan Union of Education and Culture, Brazil ^bCity of São Paulo University, Brazil ^cThe George Institute for Global Health, Australia

Moral Harassment at Work Model and Inability

Izabel Carolina Martins Campos^{ab} Lizandra da Silva^a, Rafaela Luiza Trevisan^b, Roberto Moraes Cruz^a

^aFederal University of Santa Catarina, Brazil ^bState Secretary of Administration's Office, Brazil

DEVELOPMENT OF FORCE-ENDURANCE MODELS FOR SIMULATED DENTAL TASK

Ganeswaren, V, and Bishu, R.R.

Department of Mechanical and Materials Engineering, University of Nebraska, US

COMPARISON OF INDEX OF ABILITY TO WORK (ICT) AMONG WORKERS OF DAY AND NIGHT FIXED WORK SHIFT

Luciana Duarte Satler de Oliveira, Sarina Occhipinti Magalhães

FUMEC University, Brazil ; Federal University of Minas Gerais – UFMG, Brazil

Date: 16/02
Room: 10
Time: 02:30 – 04:00pm

S-HEALTH 11 - SPECIAL TOPICS IN HEALTHCARE 4

Design and Ergonomics of package inserts of drugs in Brazil: a reality in construction
Charles Ricardo Leite da Silva^a and Marcelo Marcio Soares^b
^aSão Paulo State University, Bauru, Brazil ^bFederal University of Pernambuco, Brazil .

How user diversity and country of origin impact the readiness to adopt E-health technologies: An intercultural comparison
Wiktorija Wilkowska^a, Martina Ziefle^a and Firat Alagöz^a
^aHuman Technology Centre, RWTH University Aachen, Germany

Using Walker During Walking : A Pilot Study for Health Elder
Yeh Po-Chan^a, and Leung Cherng-Yee^b
^aThe Graduate Institute of Design Science, Tatung University, Taiwan. ^bThe Department of Industrial Design, Tatung University, Taiwan.

An office chair to influence the sitting behavior of office workers
R.H.M. Goossens^{a,b}, Netten, M.P.^a, Van der Doelen, B.^a
^aDepartment of Applied Ergonomics and Design, Delft University of Technology, The Netherlands
^bDepartment of Neuroscience, Erasmus MC, The Netherlands

Life-style factors predicting the changes in aerobic capacity of ageing firefighters at three- and thirteen-year follow-ups
Punakallio, A ; Lusa, S ; Luukkonen, R ; Lindholm, H
Finnish Institute of Occupational Health – Finland

A NOISE POLLUTION SURVEY IN AN IRANIAN TOBACCO PRODUCTS COMPANY
MOHAMMAD REZA MONAZZAM^a, HAMID SHIRI^b, SAMANEH MOMEN BELLAH FARD^c, ZEINAB BAROONIZADEH^a
^aDepartment of Occupational Hygiene, Tehran University of Medical Sciences, Iran ^bDepartment of Ergonomics, University of Social Welfare and Rehabilitation Science, Iran ^cDepartment of Environmental Science, Islamic Azad University, Iran

Area – Human Factors and Sustainable Development
Chair: Klaus J. Zink, University of Kaiserslautern - Germany

Date: 14/02
Room: 05
Time: 01:00 – 02:30pm

S-HFSD 01 - Human Factors and Sustainable Development 01

A low cost technique to evaluate usable product for small manufacturing companies: a case study on Garcia robot
Vatana An^a and Marcelo Soares^b
^aUniversity of Central Florida, USA ^bDepartment of Design, Federal University of Pernambuco, Brazil

Social responsibility and work conditions : building a reference label, Démarche T®
Sylvain Biquand^a, Benoit Zittel^b

^aAbilis ergonomie, Paris, France ^bAnthropie, Marseille, France

A study of material composition disclosure practices in green footwear products

Jocelise J. Jacques^a, Lia B. M. Guimarães^b

^aDepartment of Design and Graphics, Federal University of Rio Grande do Sul, Brazil ^bDepartment of Industrial Engineering, Federal University of Rio Grande do Sul, Brazil

Designing for multiple global user populations: Increasing resource allocation efficiency for greater sustainability

Nadadur, G., Parkinson, M.B.

Department of Mechanical and Nuclear Engineering, The Pennsylvania State University, USA

The usability of a product can be an ally of sustainability

Thaiana P. Anjos^a, Márcio Matias^b and Leila A. Gontijo^a

^aDepartment of Production and Systems Engineering, Federal University of Santa Catarina, Brazil.

^bDepartment of Information Science, Federal University of Santa Catarina, Brazil

Date: 14/02

Room: 05

Time: 02:30 – 04:00pm

S-HFSD 02 - Human Factors and Sustainable Development 02

Cooking behaviours: a user observation study to understand energy use and motivate savings

Luis Oliveira, Val Mitchell and Kevin Badni

Loughborough University, United Kingdom

The Importance of Ergonomics to Sustainability throughout a Building's Life Cycle

Linda Miller^a, Julie Dorsey^b and Karen Jacobs^c

^aEWI Works International Inc., Canada ^bDepartment of Occupational Therapy, Ithaca College, USA

^cDepartment of Occupational Therapy, Boston University, USA

Ergoecology: evolution and challenges

Gabriel García-Acosta^{a,b}, Martha Helena Saravia Pinilla^c and Carles Riba i Romeva^b

^aNational University of Colombia, Colombia. ^bPolytechnic University of Catalunya, Spain. ^cDesign Department, Javeriana Polytechnic University, Colombia

The human component of sustainability: a study for assessing “human performances” of energy efficient construction blocks

Erminia Attaianese^a, Gabriella Duca^a

^a Department DICATA / LEAS Laboratory, University of Naples Federico II, Italy

A utility theory-based approach to reducing raw material usage in non-adjustable artifacts, tasks, and environments

Nadadur, G., Parkinson, M.B.

Department of Mechanical and Nuclear Engineering, The Pennsylvania State University, USA

Date: 14/02

Room: 05
Time: 04:30 – 06:00pm

S-HFSD 03 - Human Factors and Sustainable Development 03

User-centered ecotourism development

Talsma, L, MSc^a, Molenbroek, J.F.M, dr. ir.^b

^aThe User's Advocate, The Netherlands ^bDelft University of Technology, The Netherlands

A broader consideration of human factor to enhance sustainable building design

Erminia Attaianese ^a

Department DICATA/LEAS, University of Naples Federico II, Italy

Sustainability and cities: a proposal for implementation of a sustainable town

L. B. de M. Guimarães ^a

^aFederal University of Rio Grande do Sul, Brazil

VLT: A sustainable solution to urban mobility, in João Pessoa-PB

Uiara Wasconcelos de Assis^a, Glaucia Wasconcelos Silva^b

^aInstitute of Higher Education of Brasilia, Brazil ^bLiberal Professional - Dental Ergonomics-Ms, Brazil

Design and the global and human wellbeing

Geisy Anny Venâncio^a, Adriano Heemann^b and Liliane Iten Chaves^c

^aFederal University of Paraná, Brazil ^bFederal University of Paraná, Curitiba, Brazil ^cTechnical Drawing Department, Fluminense Federal University, Brazil

Environmental management performance for brazilian industrials: measuring with the item response theory

Andréa Cristina Trierweiler^a, Blênio César Severo Peixe^b, Rafael Tezza^c, Antonio Cezar Bornia^d, Dalton Francisco de Andrade^e and Lucila Maria de Souza Campos^f

^{abdef}Production Engineering Department, Federal University of Santa Catarina, Brazil ^cDepartment of Business Administration, Santa Catarina State University, Brazil

Area – Human Simulation and Virtual Environments

Chair: Thomas Alexander, Fraunhofer FKIE – Germany

Co-Chair: Gunther Paul, University of South Australia - Australia

Date: 15/02

Room: 05

Time: 01:00 – 02:30pm

S-HSVE 01 - Human Simulation and Virtual Environments 1

Adaptive Information Design for Outdoor Augmented Reality

Jan A. Neuhöfer^a, Felix Govaers^a, Hichem El Mokni^a and Thomas Alexander^a

^aFraunhofer Institute for Communication, Information Processing and Ergonomics (FKIE), Germany

Comparing two types of navigational interfaces for Virtual Reality

Luís Teixeira^{a,b}, Elisângela Vilar^{a,b}, Emília Duarte^{b,c}, Francisco Rebelo^{a,b} and Fernando Moreira da Silva^d

^aTechnical University of Lisbon, Portugal. ^bTechnical University of Lisbon, Dafundo, Portugal
^cUNIDCOM/IADE – Institute of Arts, Design and Marketing, Portugal. ^dArt and Design Department–
FA/Technical University of Lisbon, Portugal.

On the Effect of Free vs. Restricted Interaction during the Exploration of Virtual Environments
Jessica Conradi, Thomas Alexander
Fraunhofer FKIE, Germany

Evaluating the iterative development of VR/AR human factors tools for manual work
Paul M. Liston^a, Alison Kay^a, Sam Cromie^a, Chiara Leva^a, Mirabelle D’Cruz^b, Harshada Patel^b, Alyson Langley^c,
Sarah Sharples^c, and Susanna Aromaa^c
^aTrinity College, University of Dublin, Ireland ^bHFRG, University of Nottingham, England ^cVTT Technical
Research Centre of Finland, Finland

Preparative study regarding the implementation of a muscular fatigue model in a virtual task simulator
David Brouillette^a, Guillaume Thivierge^b, Denis Marchand^b and Julie Charland^a
^aDassault Systemes, Canada ^bDepartment of Kinesiology, University of Quebec at Montreal (UQAM),
Canada

A multi-criteria optimization heuristic for improving the quality of project plans
Tackenberg, S ; Duckwitz, S ; Schmitz, P ; Rieder, S
RWTH Aachen University – Germany

Date: 15/02
Room: 05
Time: 02:30 – 04:00pm

S-HSVE 02 - Human Simulation and Virtual Environments 2

Patterns of correlation between vehicle occupant seat pressure and anthropometry
Gunther Paul^a, Nathan Daniell^a and François Fraysse^a
^aUniversity of South Australia, Australia

New enhancements and validation of force based posture and discomfort predictions
Hans-Joachim Wirsching^a and Florian Engstler^b
^aErgonomic Simulation Department, Human Solutions, Germany ^bTechnical University Munich, Germany

DHM in Human-Centered Product Design: A Case-Study on Public Transport Vehicle
Santos², V.; Guimarães¹, C.P.; Franca¹, G. A. N.; Cid¹, G.L.; Paranhos¹, A. G.;
¹National Institute of Technology - INT/ MCT ² Pontifical Catholic University of Rio de Janeiro PUC-Rio

DHM simulation in virtual environments: a case-study on control room design
Zamberlan, M^a, Santos, V^b, Streit, P^a, Oliveira, J^a, Cury, R^a, Negri, T^a, Pastura, F^a, Guimarães, C^a and Cid, G^a
^aNational Institute of Technology, INT, Brazil ^b Pontifical Catholic University of Rio de Janeiro – PUC-Rio,
Brazil

Digital test assembly of truck parts with the IMMA-tool - an illustrative case
L. Hanson^{a, b}, D. Högberg^c and M. Söderholm^a
^aScania CV AB, Sweden ^bChalmers University of Technology, Sweden ^cUniversity of Skövde, Sweden

Features and limitations of digital human models - A new German guideline -
Gert Zülch^a

^aKarlsruhe Institute of Technology (formerly University of Karlsruhe), Germany

Date: 15/02
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Time: 04:30 – 06:00pm

S-HSVE 03 - Human Simulation and Virtual Environments 3

Elbow Torque Ellipses: Investigation of the mutual influences of rotation, flexion, and extension torques
Fabian Guenzkofer, Heiner Bubb and Klaus Bengler
Technical University of Munich, Germany

Modeling human-bed interaction: the predictive value of anthropometric models in choosing the correct bed support
Vincent Verhaert^a, Hans Druyts^b, Dorien Van Deun^a, Tom De Wilde^b, Karel Van Brussel^b, Bart Haex^a and Jos Vander Sloten^a
^aMechanical Engineering Department, Catholic University Leuven, Belgium ^bR&D Custom8 NV, Belgium

Applications of Agent-based Simulation for Human Socio-cultural Behavior Modeling
Hong Jiang, Waldemar Karwowski, and Tareq Z. Ahram
Department of Industrial Engineering and Management Systems, University of Central Florida, USA

DHM and serious games: a case-study oil and gas laboratories
Santos, V^a, Zamberlan, M^b, Streit, P^b, Oliveira, J^b, Guimarães, C^b, Pastura, F^b and Cid, G^b
^a Pontifical Catholic University of Rio de Janeiro – PUC –Rio, Brazil ^b National Institute of Technology, Brazil

Skill training in Multimodal virtual environments
Daniel Gopher
Research Center for Work Safety and Human Engineering, Faculty of Industrial Engineering and Management Technion, Israel

The Added Value of Virtual Reality Technology and Force Feedback for Surgical Training Simulators
L. Zhang^a, C. Grosdemouge^a, V. S. Arikatla^b, W. Ahn^b, G. Sankaranarayanan^b, S. De^b, D. Jones^c, S. Schwaitzberg^d, and C.G.L. Cao^a
^aDepartment of Mechanical Engineering, Tufts University, USA ^bRensselaer Polytechnic Institute, USA
^cDepartment of Surgery, Beth Israel Deaconess Medical Center, USA ^dDepartment of Surgery, Cambridge Health Alliance Hospital, USA

Area – Musculoskeletal Disorders

Chair: Enrico Occhipinti, University of Milano and Foundation “Ca’ Granda” – Italy

Date: 13/02
Room: 11
Time: 01:00 – 02:30pm

S-MSDs 01 - Methods and tools for WMSDs prevention with a special attention to economic issues
Chair: Sven Erik Mathiassen

Musculoskeletal Disorders: a New Approach
Kamiel Vanwonterghem^a Pongjan Yooapat^b, Christophe Maes^c
^aCergo International, Breestraat, Belgium ^bRangsit University, Thailand ^cMensana, Belgium

Proper manual handling techniques to prevent low back pain, a Cochrane Systematic Review

Jos H. Verbeek^a, Kari-Pekka Martimo^a, P. Paul F.M. Kuijer^b, Jaro Karppinen^a, Eira Viikari-Juntura^a, Esa-Pekka Takala^a

^aFinnish Institute of Occupational Health, Finland ^bCoronel Institute of Occupational Health, University of Amsterdam, The Netherlands

Modeling costs of exposure assessment methods in industrial environments

Catherine Trask^{a*}, Svend Erik Mathiassen^a, Jens Wahlström^{a,b}, Marina Heiden^a, Mahmoud Rezagholi^a

^aDepartment of Occupational and Public Health Sciences, University of Gävle, Sweden ^bDepartment of Public Health & Clinical Medicine, Umeå University, Sweden

Cost-efficient observation of working postures from video recordings – more videos, more observers or more views per observer?

Svend Erik Mathiassen^{a*}, Per Liv^a, Jens Wahlström^{ab}

^aDepartment of Occupational and Public Health Sciences, University of Gävle, Sweden ^bDepartment of Public Health & Clinical Medicine, Umeå University, Sweden

The trade-off between meticulousness and methodological variance in normalization of low back EMG

Jennie Jackson^a and Svend Erik Mathiassen^a

^aDepartment of Occupational and Public Health Sciences, University of Gävle, Sweden

The economic evaluation of a Participatory Ergonomics programme to prevent low back and neck pain

Maurice Driessen^{a,b}, Judith Bosmans^c, Karin Proper^{a,b}, Johannes Anema^{a,b}, Paulien Bongers^{a,b,d}, Allard van der Beek^{a,b}

^aBody@Work TNO VUmc, Research Center Physical Activity, Work and Health, The Netherlands

^bDepartment of Public and Occupational Health, VU University Medical Center, The Netherlands

^cDepartment of Health Sciences, VU University, The Netherlands ^dTNO Quality of Life, The Netherlands

Date: 13/02

Room: 11

Time: 02:30 – 04:00pm

S-MSDs 02 - Advanced manufacturing systems and WMSD prevention

Chair: Natale Battevi

Lean Production and Work-related Musculoskeletal Disorders: Overviews of international and Swedish studies

Mikael Brännmark^{a,b} and Malin Håkansson^a

^aRoyal Institute of Technology (KTH), Sweden ^bLinköping University, Sweden

An integrated tool to support engineers for WMSDs risk assessment during the assembly line balancing

Raffaele Di Benedetto^a and Michele Fanti^b

^aCEO Italian Center for Ergonomics, Italy ^bCTO Italian Center for Ergonomics, Italy

Handwheel valve operation: assessment of four opening methods in terms of muscle loading, perceived comfort, and efficiency

Fereydoun Aghazadeh, Saif Al Qaisi, Francis Hutchinson, and Laura Ikuma

Department of Construction Management and Industrial Engineering, Louisiana State University, USA

Quantitative analysis of repetitive movement as a tool for diagnostic support in ergonomics

Paulo Antonio Barros Oliveira^a and Juliana Scopel^b

^{a,b}Medical School, Federal University of Rio Grande do Sul (UFRGS), Brazil

Old Scissors to industrial automation: the impact of technologic evolution on worker's health

Rita de Cassia Clark Teodoroski^a, Vanessa Mazzocchi Koppe^b and Eugênio Andrés Díaz Merino^c

^aEstácio de Sá Faculty of Santa Catarina, Brazil. ^bEstácio de Sá Faculty of Santa Catarina, Brazil. ^cFederal University of Santa Catarina, Brazil.

Date: 13/02

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Time: 04:30 – 06:00pm

S-MSDs 03 - Methods for risk assessment

Chair: Enrique Alvarez Casado

Method Inventory for assessment of physical activity at VDU workplaces

Rolf Ellegast, Britta Weber and Rena Mahlberg

Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA), Germany

Assessing manual lifting tasks based on segment angle interpolations

Chien-Chi Chang^a, Xu Xu^a, Gert S. Faber^{a,b}, Idsart Kingma^c and Jack Dennerlein^b

^aLiberty Mutual Research Institute for Safety, USA ^bDepartment of Environmental Health, Harvard School of Public Health, USA ^cInstitute for Fundamental and Clinical Human Movement Sciences, Vrije Universiteit, The Netherlands

Workload evaluation of repetitive one-handed handling by biomechanical, physiological, and subjective measures

Jung, M ; Mo, S ; Lee, K ; Kwag, J

Ajou University - Republic of Korea

Biomechanical analysis of compression force at intervertebral disc L5/S1 under asymmetric manual material handling

De la Teja, G ; De la Teja ; Santa Cruz, L

National Autonomous University of Mexico – Mexico

Prevalence of low back disorders among female workers and biomechanical limits on the handling of load and patients

Manuel Gutiérrez^a and Jorge Monzó^b

^aUniversity of Concepción, Chile. ^bKinesiology Unit, Hospital las Higueras of Talcahuano, Chile

Application of discriminant analysis-based model for prediction of risk of low back disorders due to workplace design in industrial jobs

Ganga, G. M. D.^a, Esposto, K. F.^b and Braatz, D.^a

^aProduction Engineering Department, University Federal of São Carlos, Brazil. ^bProduction Engineering Department, University of São Paulo, Brazil.

Date: 14/02

Room: 11

Time: 01:00 – 02:30pm

S-MSDs 04 - Contributions to methods for risk assessment and studies on working postures and muscular activity

Chair: Tom Armstrong

Developing a framework for assessing muscle effort and postures during computer work in the field: The effect of computer activities on neck/shoulder muscle effort and postures.

Bruno Garza J.L.^a, Eijkelhof B.H.W.^{b,c}, Johnson P.W.^f, Raina S.M.^a, Rynell, P.^f, Huysmans, M.A.^{b,c}, van Dieën J.H.^{c,d}, van der Beek A.J.^{b,c}, Blatter B.M.^{c,e} and Dennerlein J.T.^{a,g}

^aDepartment of Environmental Health, Harvard School of Public Health, USA ^bDepartment of Public and Occupational Health and the EMGO Institute for Health and Care Research, VU University Medical Center, The Netherlands ^cBody@Work Research Center on Physical Activity, Work and Health, The Netherlands ^dResearch Institute MOVE, VU University, The Netherlands ^eNetherlands Organisation for Applied Scientific Research, The Netherlands ^fDepartment of Environmental and Occupational Health Sciences, USA ^gDepartment of Orthopaedic Surgery, Brigham and Women's Hospital, Harvard Medical School, U.S.A.

A biomechanical modeling approach to quantify musculoskeletal loading during dynamic two-wheeled cart pushing tasks

Sun, Y ; Aghazadeh, F ; Nimbarte, A

West Virginia University, Louisiana State University – USA

Evaluation of a personal device in reducing the risk of low back disorders during stooped work

Brent L. Ulrey^a, and Fadi A. Fathallah^a

^aDepartment of Biological and Agricultural Engineering, University of California, USA

Spinal disc hydration status during simulated stooped posture

Kenneth Johannaber^a, and Fadi A. Fathallah^a

^aDepartment of Biological and Agricultural Engineering, University of California, USA

Principle component analysis of exposure variation analysis during computer work at presence of delayed onset muscle soreness

A. Samani^a, A. Kawczyński^b, Chmura, J^b and P. Madeleine^b

^aDepartment of Health Science and Technology, Aalborg University, Denmark ^bDepartment of Athletes Motor Skills, University School of Physical Education, Poland

Interactions between task repetition and psychosocial factors

^aMichael W. Riley, ^bYu-Ting Hung, ^bMao-Jiun Wang, ^bYueh-Ling Lin, and ^aJessica C. Blunk

^aIndustrial and Management Systems Engineering Department, University of Nebraska-Lincoln, USA

^bIndustrial Engineering and Engineering Management Department, National Tsing Hua University, Taiwan

Date: 14/02

Room: 11

Time: 02:30 – 04:00pm

S-MSDs 05 - Prevention, disability and return at work

Chair: Jean Pierre Zana

Mitigation of Musculoskeletal Problems and Body Discomfort of Agricultural Workers through Educational Intervention

Rekha Vyas

Maharana Pratap University of Agriculture & Technology, Udaipur (Raj.)

Intervention strategy for reducing musculoskeletal disorders

Montiel, A

Mutual Security of the Chilean Chamber of Construction – Chile

Applied ergonomics program manual cut sugarcane
Kaizer, A ; Santos, E ; Ramos, F
NR Work Ltda | AEDU | NR Work Ltda – Brazil

Swabbing: Touchscreen-based Input Technique for People with Hand Tremor

Alexander Mertens^a, Jan Hurtmanns^a, Chatchavan Wacharamanotham^b, Martin Kronenbürger^c,
Jan Borchers^b, and Christopher M. Schlick^a

^aInstitute of Industrial Engineering and Ergonomics, RWTH Aachen University, Germany ^bMedia Computing Group, RWTH Aachen University, Germany ^cDepartment of Neurology, Medical Faculty, RWTH Aachen, Germany

EVALUATION OF THE EXERCISE INTERVENTION WITH THE “BACK SCHOOL” EDUCATION PROGRAM IN A BRAZILIAN COMPANY OF CIGARS: A STUDY CASE

Sânzia Bezerra Ribeiro^{a*}, Djeynefer Silveira Wagemacker^b, Lilian Becerra de Oliveira^a,

^aAdventist Faculties of Bahia. ^bAdventist Faculties of Bahia.

Low back pain disability and stay at work: contradiction or necessity?

Rosimeire Simprini Padula^{a,b}, Rodrigo Luiz Carregaro^c, Bruna Melo^a, Cláudia Regina da Silva^a; Ana Beatriz Oliveira^d.

^aSão Francisco University, Brazil ^bCity of São Paulo University, Brazil, ^cFederal University of Mato Grosso do Sul, Brazil. ^dDepartment of Physical Therapy, Federal University of São Carlos, SP.

Date: 14/02

Room: 11

Time: 04:30 – 06:00pm

S-MSDs 06 - MSD Outcomes in different jobs-1

Chair: Wendy Macdonald

Body discomfort in poultry slaughterhouse workers

Adriana Seára Tirloni^a, Diogo Cunha dos Reis^b, Josenei Braga dos Santos^c, Pedro Ferreira Reis^a, Ailton Barbosa^d and Antônio Renato Pereira Moro^{a,b,e}

^aFederal University of Santa Catarina, Brazil ^bFederal University of Santa Catarina, Brazil ^cFederal University of Santa Catarina, Brazil ^dDepartment of Information Systems, State University of Santa Catarina, Brazil ^eDepartment of Physical Education, Federal University of Santa Catarina, Brazil

Risk factors for sciatic pain among male construction workers

Jens Wahlström*, Lage Burström, Tohr Nilsson, Bengt Järvholm

*Department of Public Health & Clinical Medicine, Umeå University, Sweden

EFFECT OF LOW BACK PAIN ON SOCIAL AND PROFESSIONAL LIFE OF DRIVERS OF KOLKATA

Somnath Gangopadhyay and Samrat Dev

Occupational Ergonomics Laboratory, Department of Physiology

University College of Science and Technology, University of Calcutta

Computer use and ulnar neuropathy: results from a case-referent study

Andersen JH^a, Frost P^b, Fuglsang-Frederiksen A^c, Johnson B^c, and Wulff Svendsen S^a

^aDepartment of Occupational Medicine, Herning Hospital, Denmark ^bDepartment of Occupational Medicine, Aarhus University Hospital, Denmark ^cDepartment of Neurophysiology, Aarhus University Hospital, Denmark

Associations between Psychosocial Risk Factors and Musculoskeletal Disorders: Application to the IT Profession in India

Ranjana K. Mehta^a and Prakriti Parijat^b

^aDepartments of Cognitive and Learning Sciences and Kinesiology and Integrative Physiology, Michigan Technological University, USA ^bHuman Factors International, India

Musculoskeletal Symptoms, Postural Disorders And Occupational Risk Factors: Correlation Analysis

Maria Luiza C.Comper^{a,b}, Felipe Macedo^a and Rosimeire S. Padula^b

^aMetropolitan Union of Education and Culture, Brazil ^bCity of São Paulo University, Brazil

Date: 15/02

Room: 11

Time: 01:00 – 02:30pm

S-MSDs 07 - MSD Outcomes in different jobs-2

Chair: Ruddy Facci

Nurses' working tasks and MSDs back symptoms: results from a national survey

Serranheira, Florentino^a, Cotrim, Teresa^b, Rodrigues, Victor^c, Nunes, Carla^d and Sousa-Uva, António^e

^{a, d, e} New University of Lisbon, Lisbon, Malaria and Tropical Diseases Research Center, Portugal ^bTechnical University of Lisbon, Portugal ^cNursing College of Vila Real/CIDESD/University of Trás-os-Montes and Alto Douro, Portugal

Investigation of musculoskeletal symptoms in a poultry processing plant

Marçal, M ; Mazzoni, C

Federal University of Health Sciences of Porto Alegre, FUMEC University – Brazil

Prevalence of Musculoskeletal Disorders among Staffs in Specialized Healthcare Centre

Nurul Ikhmar Ibrahim and Devinthiran Mohanadas

University of Malaysia Perlis (UniMAP), Malaysia

Physical and psychosocial indicators among office workers from public sector with and without musculoskeletal symptoms

Barbieri, Dechristian França^a; Nogueira, Helen Cristina^a; Bergamin, Letícia Januário^b and Oliveira, Ana Beatriz^{a,b}

^aFederal University of São Carlos UFSCar, Brazil ^bFederal University of São Carlos UFSCar, Brazil

An Ergonomic Study on the Onset of Mental Fatigue among the Load Handling Workers of a Central Market Area in Kolkata

Somnath Gangopadhyay and Tamal Das

Department of Physiology, University College of Science and Technology, University of Calcutta, India

Discrepancies in pain presentation caused by adverse psychosocial conditions as compared to pain due to high physical workload?

Inger Arvidsson, Jenny Gremark Simonsen, Istvan Balogh, Gert-Åke Hansson, Camilla Dahlqvist, Lothy Granqvist, Kerstina Ohlsson, Anna Axmon, Björn Karlson and Catarina Nordander

Department of Occupational and Environmental Medicine, University Hospital, Sweden

Date: 15/02

Room: 11

Time: 02:30 – 04:00pm

S-MSDs 08 - Risk for MSD in different tasks and jobs – 1

Chair: Daniela Colombini

News Cameramen in public service - ergonomics, physical health factors, fitness and work load

Schell, E

Karolinska Institutet - Sweden

Reducing whole body vibration in forklift drivers

Motmans R^a

^aDepartment of Ergonomics, IDEWE, Belgium

Analysis of urban cleanness agents' workstation on the appearance of Work Related Musculoskeletal Disorders.

Leonildo Santos do Nascimento Júnior^a, Juliana da Costa Santos Pessoa^b

^aProduction and Systems Department, University of Minho, Portugal ^bPhysiotherapy Department, University Center of João Pessoa, Brazil

Evaluation and redesign of manual material handling in a vaccine production centre's warehouse

Yaniel Torres^a and Silvio Viña^b

^aErgoCuba research team, Cuba ^b Department of Industrial Engineering, "José Antonio Echeverría" Institute of Technology, Cuba

Biomechanical analysis of loading/unloading a ladder on a truck

Cristiane Shinohara Moriguchi^a, Leticia Carnaz^a, Luiz Carlos de Miranda Junior^b, Richard William Marklin^c and Helenice Jane Cote Gil Coury^a

^aDepartment of Physical Therapy, Federal University of São Carlos, Brazil. ^bState University of Campinas, Limeira, Brazil. ^c Department of Mechanical Engineering, Marquette University, United States of America.

Date: 15/02

Room: 11

Time: 04:30 – 06:00pm

S-MSDs 9 - Risk for MSD in different tasks and jobs – 2

Chair: Enrico Occhipinti

Evaluation of lumbar overload in hotel maids

J.S. Silva-Júnior, L.R.C. Correa and L.C. Morrone

Department of Social Medicine, Santa Casa Medical Sciences School, Brazil

Participatory Ergonomics among Female Cashiers from a Department Store

María Yanire León Cristancho

Ergonomics Unit, University of Concepción, Chile

Biomechanical strain of goldsmiths

Paula Emanuela Fernandes Cândido^a, Juliana Vieira Schmidt Teixeira^a, Antônio Renato Pereira Moro^a and Leila Amaral Gontijo^a.

^aFederal University of Santa Catarina, Department of Production Engineering and Systems, Brazil

Risk factors for repetitive strain injuries among school teachers in Thailand

Sunisa Chaiklieng^{a,c} and Pornnapa Suggaravetsiri^b

^aDepartment of Environmental Health Science, Khon Kaen University, Thailand ^bDepartment of Epidemiology, Khon Kaen University, Thailand ^cBack, Neck and other Joint Research Group, Khon Kaen University, Thailand

Job factors related to musculoskeletal symptoms among nursing personnel – a review

Marina Zambon Orpinelli Coluci^a and Neusa Maria Costa Alexandre^a

^aDepartment of Nursing, University of Campinas – UNICAMP, Brazil

Date: 16/02

Room: 11

Time: 01:00 – 02:30pm

S-MSDs 10 - Studies on muscle activities

Chair: Nils Fallentin

Study on lumbar kinematics and the risk of low back disorder in female university students by using shoes of different heel heights

Rauf Iqbal^a, Amitabha De^b, Wricha Mishra^c, Shreya Maulik^c and Chandra AM^d

^aNational Institute of Industrial Engineering, India ^bNational Institute of Industrial Engineering, India

^cNational Institute of Industrial Engineering, India ^dUniversity of Calcutta, India

Motor Variability – An important issue in occupational life

Divya Srinivasan and Svend Erik Mathiassen

Department of Occupational and Public Health Sciences, University of Gavle, Sweden

Long periods with uninterrupted muscle activity related to neck and shoulder pain

Therese N Hanvold, Morten Wærsted and Kaj Bo Veiersted

Department of Work Psychology and Physiology, National Institute of Occupational Health, Norway

Specificity of back muscle response to submaximal fatiguing contractions

Nils Fallentin^a, Rammohan Maikala^a, Jacob Banks^a, Niall Obrien^a and Amanda Rivard^a

^aLiberty Mutual Research Institute for Safety, USA

Stationarity test of electromyographic signals during isokinetic trunk exertions

Young-Jin Cho^a and Jung-Yong Kim^a

^aDepartment of Industrial and Management Engineering, Hanyang university, Korea

Muscular activity in different locomotion plans with the use of various shoes types and barefoot

Geraldo Fabiano de Souza Moraes^a, Davidson Passos Mendes^b, Adriana Antunes Papinni^c

^aUniversity Federal of Itajubá –Brazil. ^bUniversity Federal of Itajubá –Brazil. ^cB.Sc Physical Therapy

Date: 16/02

Room: 11

Time: 02:30 – 04:00pm

S-MSDs 11 - Clinical aspects of WMSDs and further contribution to analysis of posture and WMSDs

Chair: Edoardo Santino

Preventing Rsi/Wruld: Use of esthesiometry to assess hand tactile sensitivity of slaughterhouse Workers

Reis, P., Moro, A.

Federal University of Santa Catarina, Brazil and Instituto de Ensino Superior de Foz do Iguaçu, Brazil

COMPARATIVE ANALYSIS OF ASSESSMENT OF THE CRANIOCERVICAL EQUILIBRIUM THROUGH TWO METHODS: CEPHALOMETRY OF ROCABADO AND CERVICAL RANGE OF MOTION.

Lilian Becerra de Oliveira, PT, AMPT^a; Franklin Cajaíba, PT^a; Wesley Costa, PT^a; Mariano Rocabado, PHD^b; Rodrigo Lazo-Osório, PHD^c; Sanzia Ribeiro, PT, MS^a

^aAdventist Faculties of Bahia, Brazil ^bUniversity Andres Bello, Chile. ^cUniversity Vale do Paraíba, Brazil.

Analysis of temperature on the surface of the wrist due to repetitive movements using sensory thermography

C. Camargo^a, J. Ordorica^a, E. J. De la Vega^b, J. E. Olguín^a, O. R. López^a and J. A. López^c

^aDepartment of Industrial Engineering, Autonomous University of Baja California, Mexico ^bHermosillo's Institute of Technology, Mexico ^cDepartment of Industrial Engineering, Autonomous University of Baja California, Mexico

Functional analysis of scapular position in asymptomatic professors

Geraldo Fabiano de Souza Moraes^a, Davidson Passos Mendes^b

^aUniversity Federal of Itajubá, Brazil ^bUniversity Federal of Itajubá, Brazil.

Assessment of pain and upper limbs position of dentistry students

Moraes, G ; Mendes, D

Universidade Federal University of Itajuba – Brazil

Shoes influence in women posture

Geraldo Fabiano de Souza Moraes^a, Davidson Passos Mendes^b, Adriana Antunes Papinni^c

^aFederal University of Itajubá – Brazil. ^bFederal University of Itajubá – Brazil. ^cB.Sc Physical Therapy.

Date: 16/02

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Time: 01:00 – 02:30pm

S-MSDs 12 - Miscellanea of techniques for analysis and applications useful for WMSDs prevention

Chair: Marco Placci

Can Digital Signals from the Keyboard Capture Force Exposures during Typing?

Jeong Ho Kim^a and Peter W Johnson^{a,b}

^aDepartment of Industrial and Systems Engineering, University of Washington, USA ^bDepartment of Environmental and Occupational Health Sciences, University of Washington, USA

Comparison between hand surface markers and joint center-based markers

Jung, M ; Mo, S ; Lee, K ; Kwag, J

Ajou University – Republic of Korea

Notebook computer use with different monitor tilt angle: Effects on posture, muscle activity and discomfort of neck pain users

Wen-Ko Chiou^a, Wei-Ying Chou^a, Bi-Hui Chen^b

^aDepartment of Industrial Design, Chang Gung University, Taiwan ^bChihlee Institute of Technology, Taiwan

Developing the ergonomics of a field data recorder

Nyberg, M ; Savinainen, M ; Sillanpaa, J

Finnish Institute of Occupational Health – Finland

Usability analysis of 2D graphics software for designing technical clothing

Rita de Cassia Clark Teodoroski^a, Edilene Zilma Espíndola^b, Enéias Silva^c, Antônio Renato Pereira Moro^d and Vera Lucia D. V. Pereira^e

^aEstácio de Sá Faculty of Santa Catarina, Brazil. ^bFederal University of Santa Catarina, Brazil. ^cFederal University of Santa Catarina, Brazil. ^dFederal University of Santa Catarina, Brazil. ^eFederal University of Santa Catarina, Brazil

Area – Organizational Design and Management

Chair: Michelle Robertson, Liberty Mutual Research Institute for Safety - USA

Date: 14/02

Room: 07

Time: 01:00 – 02:30pm

S-ODAM 01 - Telework, Knowledge Workers and Office Design: Effects on Comfort, Health and Productivity

The effects of new ways of work in the Netherlands: national data and a case study

P. Vink^a, M. Blok^b, M. Formanoy^b, E. de Korte^{a/b} and L. Groenesteijn^{a/b}

^aDelft University of Technology, The Netherlands. ^bTNO, The Netherlands

New Ways of Working: does flexibility in time and location of work change work behavior and affect business outcomes?

Merle M. Blok^a, Liesbeth Groenesteijn^{a,b}, Roos Schelvis^a and Peter Vink^{a,b}

^aTNO, The Netherlands. ^bDelft University of Technology, The Netherlands.

Examining the macroergonomics and safety factors among teleworkers: Development of a conceptual model

Michelle M. Robertson^a, Lawrence M. Schleifer^b and Yueng-hsiang Huang^a

^aLiberty Mutual Research Institute for Safety, USA ^bRockville, USA

Expectation Changes and Team Characteristics in a Participatory Design Process

Conne Mara Bazley^a, Annelise De Jong^b, Peter Vink^b

^aJimConna Inc., USA ^bTU Delft, The Netherlands

Cognitive components and the ability to ignore and adapt to irrelevant stimuli: a key factor in open plan offices?

Fostervold, Knut Inge

Department of Psychology, University of Oslo, Norway

Occupational Health and Safety Professionals strategies to improve working environment and their self-assessed impact

Kirsten Olsen

Massey University, New Zealand

Date: 14/02

Room: 07

Time: 02:30 – 04:00pm

S-ODAM 02 - Implementation and Intervention Strategies, Cross-Cultural issues: Macroergonomics Approaches

Implementation of ergonomics in a service unit: challenges and advances

Eliane Villas Bôas de Freitas Penteado^a, Maria Goretti de França^a, Ana Maria de Brito Ramalhoto^a, Ana Maria de Oliveira^a, Bruno Rangel Cortoppassi Machado^a and Joana Angélica Matos Genipapeiro^a.

^aShared Services, Petróleo Brasileiro S.A., Brasil

Implantation of an ergonomics administration system in a company: report of an occupational therapist specialist in ergonomics

Moraes, Berla^a, Andrade, Valéria Sousa^b

^aDepartament of Occupational Therapy, Federal University of Paraíba, Brazil. ^bDepartment of Occupational Therapy, Federal University of Triângulo Mineiro, Brazil.

Challenges during production introductions in a cross-cultural work system - a case study involving a Swedish and a Chinese company

Berglund, M ; Harlin, U ; Gullander, P

Linköping University | Swerea IVF – Sweden

Organizational ergonomic intervention in the improvement of Bin Store process in an automotive industry

Ogasawara, E ; Baú, L ; Frohner, G ; Lazarini, S ; Moreira, M

Fisiotrab, VDB – Brazil

The PhOCoe Model – Ergonomic Pattern Mapping in participatory design processes

Marcello Silva e Santos^a

^a Federal University of Rio de Janeiro – GENTE/COPPE Laboratory

Macroergonomic aspects in the design of development programs in IDCs

Denis A. Coelho^a, Patricia R. Ferrara^{b,c}, Ana F. Couvinhas^b, Tânia M. Lima^a and Jake K. Walter^b

^aDept. of Electromechanical Engineering, University of Beira Interior, Portugal ^bTechnoServe Mozambique, Mozambique ^cDept. of Industrial and Systems Engineering, University of Wisconsin-Madison, United States of America

Date: 14/02

Room: 07

Time: 04:30 – 06:00pm

S-ODAM 03 - Macroergonomics: Sustainability and Safety Factors in Healthcare and High Risk Organizations

Conditions for the successful integration of Human and Organizational Factors (HOF) in the nuclear safety analysis

Michèle Tosello^a, Françoise Lévêque^b, Stéphanie Dutilleul^a, Guillaume Hernandez^c and Jean-François Vautier^{c,d}

^aCEA/Cadarache ^bCEA/Marcoule ^cCEA/Fontenay-aux-Roses ^d INSTN (National Institute for Nuclear Science and Technology), France

ANALYSIS OF ORGANIZATIONAL CONDITIONS FOR RISK MANAGEMENT: THE CASE STUDY OF A PETROCHEMICAL SITE

Gaudart Corinne^a, Garrigou Alain^b and Chassaing Karine^c

^aCBRS - LISE/CREAPT - France ^bDepartment HSE, France ^cDepartment of Ergonomics, ENSC-IPB, France

Crucial issues for healthcare and nursing personnel's sustainable working life development and management: lessons learned

Shekarin, M ; Kavian Lanjani, J
University of Skövde | School of Technology and Business Studies – Sweden

Researcher practioner cooperation for healthy and sustained development in industrial and healthcare organizations: lessons learned
Kavian Lanjani, J

Organizational issues that impact on non-use of equipment for individual protection: a view of ergonomics
Eva Bessa Soares
UFOP (Federal University of Ouro Preto), Department of Production engineering, Brazil

Date: 15/02
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S-ODAM 04 - Workforce flexibility, System Design, and Economics of Human Performance

Analysis of the strain on employees in the retail sector considering work-life balance
Gert Zülch^a, Patricia Stock^a and Daniel Schmidt^a
^aKarlsruhe Institute of Technology (KIT; formerly University of Karlsruhe), Germany

Visualiztion of regulations to support design and quality control – a long-term study
Mikael Blomé^a
^aDepartment of Design Sciences, Lund University, Sweden

Macroergonomic Analysis of two different Work Organizations in a same sector of a Luminary Manufacturer
Rosimeire Sedrez Bitencourt^a and Lia Buarque de Macedo Guimarães^a
^aFederal University of Rio Grande do Sul, Brazil

Macroergonomics' contribution to the effectiveness of collaborative supply chains
Sandra Mejias Herrera^a, Luisa Huaccho Huatuco^b
^aDepartment of Industrial Engineering, Central University "Marta Abreu" of Las Villas, Cuba. ^bUniversity of Leeds, Leeds University Business School, UK

Understanding the collaborative-participatory design
Cristiele A. Scariot^a, Adriano Heemann^a and Stephania Padovani^a
^aDesign Department, University of Paraná, Brazil

Participatory design in lean production: Which contribution from employees? For what end?
M.S Perez Toralla^{ab}, P. Falzon^a and A. Morais^b
^aLaboratory of Ergonomics, Centre de Recherche sur le Travail et le Développement, Conservatoire National des Arts et Métiers, Paris, France ^bErgonomics Department, PSA Peugeot Citroën, Pôle tertiaire, Poissy, France

Date: 15/02
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Time: 02:30 – 04:00pm

S-ODAM 05 - Sustainability of Work Systems: Optimizing Human and System Performance

The workers role in knowledge management and sustainability policies
Ivan Bolis, Claudio Brunoro and Laerte Idal Szelwar

Department of Production Engineering, University of São Paulo, Brazil.

ERGONOMIC SUSTAINABILITY BASED ON THE ERGONOMIC MATURITY LEVEL MEASUREMENT

Mario Cesar Vidal^a, Carmen Lucia Campos Guizze^b, Renato José Bonfatti^c and Marcello Silva e Santos^d

^aGENTE/COPPE, Federal University of Rio de Janeiro, Brazil. ^bDepartment of Production Engineering, Fluminense Federal University, Brazil. ^cDepartment of Health and Environment, Oswaldo Cruz Foundation, Brazil. ^dGENTE/COPPE, Federal University of Rio de Janeiro, Brazil.

How could you use the ergonomics 'know-how' transfer management to enhance human working for sustainable improvements in industrially developing countries?

Faramarz Helali

Department of Business Administration, Department of Human Work Sciences, Luleå University of Technology (LTU), Sweden

Sustainable development induction in organizations: a convergence analysis of ISO standards management tools' parameters

Fabício Kurman Merlin^a, Vera Lúcia Duarte do Valle Pereira^a and Waldemar Pacheco Júnior^a

^aDepartment of Engineering and Systems, Santa Catarina Federal University, Brazil

Involvement and emancipation of the worker. Action research in a university hospital

Ivan Bolis, Claudio Brunoro and Laerte Idal Sznelwar

Department of Production Engineering, University of São Paulo, Brazil.

Partnering for workplace health and safety

Verna Blewett^a and Jill Dorrian^b

^aAppleton Institute, Central Queensland University, Australia ^bUniversity of South Australia, Australia

Date: 15/02

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S-ODAM 06 - Work System Analysis and Design, Work Organization and Prevention of Musculoskeletal Disorders

Development of a Knowledge Management System for Complex Domains

André Perott^a, Nils Schader^a, Ralph Bruder^a and Jörg Leonhardt^b

^aUniversity of Technology, Germany ^bDFS Deutsche Flugsicherung GmbH, Germany

Influence of work organization on worker's health in a company of the wholesaler

Marçal, M ; Silva, F

Health Sciences Federal University of Porto Alegre, Center for Ergonomics Occupational Health and Safety – Brazil

Prevention of MSD Within OHSMS/IMS: A Systematic Review of Risk Assessment Strategies

Amin Yazdani^a and Richard Wells^{a, b}

^aDepartment of Kinesiology, University of Waterloo, Canada ^bCentre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD), Canada

Macroergonomic Analysis of an Assembly Sector of a Furniture Company

A. A. Z. Cristiane^a, M. D. Danielle^b and C. B. Vanessa^b

^aDesign Department, State University of Londrina, Brazil ^bState University of Londrina, Brazil ^bState University of Londrina, Brazil

Date: 16/02
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Time: 02:30 – 04:00pm

S-ODAM 07 - Macroergonomics Tools, Corporate Strategies and Organizational Effectiveness

Linking human factors to corporate strategy with cognitive mapping techniques
Judy Village, Michael Greig, Filippo A. Salustri and W. Patrick Neumann
Department of Mechanical and Industrial Engineering, Ryerson University, Canada

Economics of Human Performance and Systems Total Ownership Cost
Wilawan Onkham, Waldemar Karwowski, and Tareq Z. Ahram
Department of Industrial Engineering and Management Systems, University of Central Florida, USA

Job stress management protocol using a merge between cognitive-behavioral techniques and ergonomic tools
Elaine Viola^a, Mario Cesar Vidal^b
^aErgo&Plus Consulting Services, Brazil ^bErgonomic Unit, Federal University of Rio de Janeiro, Brazil

Measuring Organizational Effectiveness in Information and Communication Technology Companies using Item Response Theory
Andréa Cristina Trierweiller^a, Blênio César Severo Peixe^b, Rafael Tezza^c, Vera Lúcia Duarte do Valle Pereira^d, Waldemar Pacheco Jr.^e, Antonio Cezar Bornia^f, Dalton Francisco de Andrade^g
^{abde}Production Engineering Department, Federal University of Santa Catarina, Brazil ^cDepartment of Business Administration, Santa Catarina State University, Brazil

Area – Process Control

Chair: Teemu Reiman, VTT Technical Research Centre of Finland

Date: 16/02
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S-PC 01 - Process Control 01

A computerized system to monitor resilience indicators in organizations
Paulo Victor Rodrigues de Carvalho^{a,b}, Alan Pinheiro de Souza^b and Jose Orlando Gomes^b
^aNuclear Engineering Institute, Brazil ^bGraduate Program in Informatics-NCE&IM, Brazil

A program to support the construction and evaluation of resilience indicators
Gilbert Jacob Huber^b, Jose Orlando Gomes^b and Paulo Victor Rodrigues de Carvalho^{a,b}
^aNuclear Engineering Institute, Brazil ^bGraduate Program in Informatics-NCE&IM, Brazil

Organizational Ergonomics of Occupational Health Methods and Processes in a Brazilian Oil Refinery
Lucy M. S. Bau^{a,b}, Jean P. Farias^{a,c}, Sandro A. Buso^a, Carolina R. Marcon Passero^{a,b}
^aPetrobras, Petróleo Brasileiro S.A., Brazil ^bFisiotrab Ergonomia, Saúde e Segurança no Trabalho Ltda., Brazil
^cQualimaster Consultoria Empresarial Ltda., Brazil

Ergonomics Program Management in Tucuruí Hydropower Plant using TPM Methodology[1]
R. M. Santos^a, A. C. Sassi^b, B. M. Sá^c, S. A. Miguez^d and A. A. Pardaul^e

aHealth Pillar, Eletrobras Eletronorte, Brazil ^bStrategic Management Committee , Eletrobras Eletronorte, Brazil ^cStrategic Management Committee , Eletrobras Eletronorte, Brazil ^dErgosy Consulting, Ergosys, Brazil ^eSuperintendência de Geração Hidráulica, Eletrobras Eletronorte, Brazil

Date: 16/02
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Time: 02:30 – 04:00pm

S-PC 02 - Process Control 02

The alarm system and a possible way forward

Alm, Håkan ^a and Osvalder, Anna-Lisa ^b

aLuleå University of Technology, Sweden bChalmers University of Technology, Sweden

HMI Conventions for process control graphics

Ruud N. Pikaar Eur.Erg.

ErgoS Engineering & Ergonomics, The Netherlands

Transfer of control system interface solutions from other domains to the thermal power industry

Bligård, L-O^a, Andersson, J^a and Osvalder, A-L^a

aDepartment of Product and Production Development, Chalmers University of Technology, Sweden

Analysis of Mental Workload of Electrical Power Plant Operators of Control and Operation Centers

Daiana Martins Vitório^a, Francisco Soares Masculo^b and Miguel O. B. C. Melo^c

abc Production Engineering Post Graduation Program, Federal University of Paraíba, Brazil.

Area – Psychophysiology in Ergonomics

Chair: Stephen Fairclough, Liverpool John Moores University - UK

Date: 16/02
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Time: 01:00 – 02:30pm

S- PsyErg 01 - Psychophysiology in Ergonomics 01

Participatory ergonomics for psychological factors evaluation in work system design

Wang, L

The University of Hong Kong – Hong Kong

Effect of Ergonomic and Workstyle Risk Factors on Work Related Musculoskeletal Disorders among IT Professionals in India

Deepak Sharan¹, Ajeesh PS¹.

¹RECOUP Neuromusculoskeletal Rehabilitation Centre, India

The effect of ambient light on maximal voluntary force production in a multi-digit pressing task

Karol, S

University of Maryland – USA

Slaughterhouse workers exposed to cold: proposal of reference thermography values for hands

Márcia Rosângela Buzanello^{a,b} and Antônio Renato Pereira Moro^{c,d}

^aFederal University of Santa Catarina, Brazil ^bDepartment of Physical Therapy, State University of West of Paraná, Brazil ^cFederal University of Santa Catarina, Brazil; ^dDepartment of Physical Education, Federal University of Santa Catarina, Brazil.

Psychological determinants of information searching activity

L. Gorunova

Journal Production Department, IOS Press, The Netherlands

Department of Ergonomics and Engineering Psychology, Saint-Petersburg State University, Russia

Minor Psychiatric Disorders among nursing workers – is there an association with current or former night work?

Thiago Bernardes Diniz, Aline Silva-Costa, Rosane Harter Griep and Lúcia Rotenberg

Oswaldo Cruz Institute, Oswaldo Cruz Foundation, Brazil.

Date: 16/02

Room: 09

Time: 02:30 – 04:00pm

S-PsyErg 02 - Psychophysiology in Ergonomics 02

Concurrent cognitive task may improve motor work performance and reduce muscle fatigue.

Maria Evstigneeva^a, Aleksandr Aleksandrov^a, Svend Erik Mathiassen^b and Eugene Lyskov^b

^aSaint Petersburg State University, Russia ^bGävle University, Sweden

Effects of physical and mental demands on shoulder muscle fatigue

Ranjana K. Mehta^a and Michael J. Agnew^b

^aDepartments of Cognitive and Learning Sciences and Kinesiology and Integrative Physiology, Michigan Technological University, USA ^bDepartment of Industrial & Systems Engineering, Virginia Tech, USA

Comparison of the perception of exertion, fatigue, pain and organizational overload in workers from two industrial sectors with different methods of work organization

Oliani, V

Federal University of Sao Carlos – Brazil

False alarms and incorrect rejections in an information security center: correlation with the frequency of incidents.

Thiers Bruno¹ and Julia Abrahão²

¹Work and Organizational Social Psychology Post graduate Department. University of Brasília (UnB). Brazil

²Work and Organizational Social Psychology Post graduate Department. University of Brasília (UnB).

Department of Production Engineering of the Polytechnic Institute. University of São Paulo. (USP). Brazil

Occupational Stress, Working Condition and Nutritional Status of Military Police Officers

Ângela Maria C. Santana^a; Josiane Keila V. Gomes^a; Dione De Marchi^a; Yassana M. Girondoli^a; Lina E. F. P. de Lima Rosado^a; Gilberto Paixão Rosado^a; Isabel Maria de Andrade^b.

^aNutrition and Health Department, Federal University of Viçosa - Brazil. ^bFederal University of Viçosa - Brazil.

Area – Safety and Health

Chair: Kwan Suk Lee, Hongik University – Korea

Date: 13/02

Room: 12

Time: 01:00 – 02:30pm

S-Saf&Hth 01 - Health Care & Safety at Work

Interventions to improve patient safety in transitional care – A review of the evidence¹

Kristin laugaland^a Karina aase^b and Paul barach^b

^aForde Hospital, Norway ^bUniversity of Stavanger, Department of Health Studies. Norway ^bUtrecht University Medical Center, Department of Anesthesia and Center for Patient Safety, Netherlands

Improvement of the human-computer interaction of an ambulatory computerized order entry system

Xiao, J ; Wang, E ; Poon, S

National Tsing Hua University, Taichung Veterans General Hospital – Taiwan

Radiological emergency response for community agencies with cognitive task analysis, risk analysis, and decision support framework

Lambert, J

University of Virginia – USA

Supporting the scholar role in intensive care nursing

M. Melles, A. Freudenthal, H. de Ridder

Department of Industrial Design, Delft University of Technology, The Netherlands

Handover Process: how to Improve quality and safety through an ergonomic solution

Giulio Toccafondi^a, Sara Albolino^a, Tommaso Bellandi^a and Francesco Venneri^b

^aPatient Safety and Clinical Risk Management Tuscany Region, Italy ^bClinical Risk Management Unit, Italy

The actuation of Physiotherapy in the certifications of occupational quality, health and safety

Helena Salvati Bertolossi Moreira^a Bruna Talini^b Isabele Maia Galvão^c José Mohamad Vilagra^d, Eduardo Gallas Leivas^e, Abel Santos de Oliveira Júnior^f

^aState University of West of Paraná, Department of Pysicotherapy, Brazil ^bPhisicoterapy in Cascavel ^cState University of West of Paraná - UNIOESTE ^dState University of West of Paraná Department of Pysicotherapy ^ePhisicoterapy in Cascavel, Inspirar College ^fState University of West of Paraná – UNIOESTE, Brazil

Date: 13/02

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Time: 02:30 – 04:00pm

S-Saf&Hth 02 - Occupational Stress

Job strain in different types of employment affects the immune response

Paolo Boscolo^a Laura Forcella^a, Marcella Reale^b, Giovina Vianale^b, Uliano Battisti^c, Roberta Bonfiglioli^d, Michela Cortini^e, Luca Di Giampaolo^a, Angela Di Donato^a, and Silvana Salerno^f

^aOccupational Health Unit, University "G. D'Annunzio" of Chieti-Pescara (Italy), ^bDepartment of Oncology and Experimental Medicine, "G. D'Annunzio" University of Chieti-Pescara (Italy), ^cINAIL Abruzzo, L'Aquila (Italy), ^dDepartment of Internal Medicine, Alma Mater Studiorum-University of Bologna, Italy, ^eUniversity "G. d'Annunzio" of Chieti-Pescara, Italy, ^fENEA, Roma (Italy) Journal Production Department, IOS Press), The Netherlands

Job Stress and Productivity Increase

Adaramola, Samson Sunday,

Dept of Human Factors/Ergonomics, Vine Tribometric Consultant, Nigeria

BURNOUT SYNDROME AND BRAZILIAN CIVIL AVIATION: a short essay on the focus on prevention

Castro M^b, Araujo L^b

^aUniversity of Gama Filho, Brazil. ^bHealth Environmental Department, University of São Paulo, Brazil.

Is occupational stress associated with work engagement?

Rosimeire Simprini Padula^a; Luciana Dias Chiavegato^a; Cristina Maria Nunes Cabral^a; Talita Almeida; Thais Ortiz^b; Rodrigo Luiz Carregaro^c.

^aCity of São Paulo University, Brazil ^bCity of São Paulo University, Brazil ^cFederal University of Mato Grosso do Sul (UFMS), Brazil

Occupational stress and biomechanical risk in a high fashion clothing company

Laura Forcella^a, Roberta Bonfiglioli^b, Piero Cutilli^c, Andrea Antonucci^a, Angela Di Donato^a, Eugenio Siciliano^d, Michela Cortini^e, Francesco Saverio Violante^b, and Paolo Boscolo^a

^aUniversity "G. d'Annunzio" of Chieti-Pescara, Italy, ^bDepartment of Internal Medicine, Geriatrics and Nephrology, Alma Mater Studiorum-University of Bologna, Italy ^cEurErg – Ergoteam s.r.l., Italy, ^dCONTARP (Regional Technical Advisory Risk Assessment and Prevention), INAIL (Italian Workers' Compensation Authority), Italy ^eUniversity "G. d'Annunzio" of Chieti-Pescara, Italy

Problems faced by cardiac patients on their pharmacological treatment: questionnaire application and results.

Lima, V ; de Mores, A

Pontifical Catholic University of Rio de Janeiro – Brazil

Date: 13/02

Room: 12

Time: 04:30 – 06:00pm

S-Saf&Hth 03 - Noise and Safety at Work

Comparison between occupational noise measurement strategies: why is it important?

Susana Costa^a and Pedro Arezes^a

^aDepartment of Production and Systems, University of Minho, Portugal

Human Response to Three Different Noise Levels in an Iranian Tire Manufacturing Company

Monazzam Esmaeil, M

Tehran University of Medical Science - Islamic Republic of Iran

SCANAM method for the assessment of industrial noise

Aleksandar Zunjic

University of Belgrade, Serbia

Analysis of noise on construction sites of high-rise buildings

Béda Barkokébas Jr.^a, Bianca M. Vasconcelos^a, Eliane Maria G. Lago^a and Aline Fabiana P Alcoforador^a

^aUniversity of Pernambuco, Brazil

The binomial work-health in the transit of Curitiba city

Eunice Tokars^a, Antonio Renato Pereira Moro^a, Roberto Moraes Cruz^a.

^aPost Graduate Program in Production Engineering, Ergonomics, Federal University of Santa Catarina, SC, Brazil

Risk assessment in the maintenance operations of the health equipments

Rodrigues, M ; Teixeira, N

University of Aveiro, The Institute of Welding and Quality – Portugal

Date: 14/02
Room: 12
Time: 01:00 – 02:30pm

S-Saf&Hth 04 - Occupational Health

How can occupational health services in Sweden contribute to work ability?

Lisa Schmidt, John Sjöström and Ann-Beth Antonsson
IVL Swedish Environmental Research Institute, Sweden

Order-picking in deep cold – physiological responses of younger and older females. Part 1: heart rate

Karsten Kluth, Sandra Baldus and Helmut Strasser
University of Siegen, Germany

Order-picking in deep cold – physiological responses of younger and older females. Part 2: body core temperature and skin surface temperature

Sandra Baldus, Karsten Kluth and Helmut Strasser
University of Siegen, Germany

Evaluation of the effect of using pictograms (pictures/signs) vs. text for training of safety procedures

Schulze, L
University of Houston – USA

System modeling with the DISC framework: evidence from safety-critical domains

Teemu Reiman, Elina Pietikäinen, Pia Oedewald, Nadezhda Gotcheva
VTT Technical Research Centre of Finland, Finland

Date: 14/02
Room: 12
Time: 02:30 – 04:00pm

S-Saf&Hth 05 - Occupational Health and Hazards

The effect on employees of violence climate in the workplace

Serpil Aytaç^a, Salih Dursun^b

^aDepartment of Labour Economics and Industrial Relations, Uludag University, TURKEY ^bUludag University, Bursa, TURKEY

Indicators of healthy work environments – a systematic review

Per Lindberg^{a,b} & Eva Vingård^a

^aDepartment of Medical Sciences, Uppsala University, Sweden ^bUniversity of Gävle, Sweden

Effects of vibration exposure on professional drivers: a field test for quantifying visual and cognitive performance

N. Costa^a, P. M. Arezes^a and R. B. Melo^b

^aDepartment of Production and Systems, University of Minho, Portugal. ^bDepartment of Ergonomics, Technical University of Lisbon, Portugal.

A STUDY ON OCCUPATIONAL HEALTH HAZARDS OF WORKERS IN SALTED VERMICELLI INDUSTRY (NAMKEEN) IN INDIA

Tiwari, G1; Brijwasi, K1; Rathore, H1; SINGH, S1

Date: 14/02
Room: 12
Time: 04:30 – 06:00pm

S-Saf&Hth 06 - Polices & Regulations in Occupational Health

In regulation we trust.

Siri Wiig^{a,b}, Jorunn Elise Tharaldsen^b

^aUniversity of Stavanger, Norway ^bPetroleum Safety Authority Norway, Norway

Whistleblowers : an essential resource for the sustainable prevention of risks in socio-technical systems

Tahar Hakim Benchekroun^a, and Sandrine Pierlot^b

^aNational Conservatory of Arts and Crafts, France ^b EDF- R&D, Industrial Risk Management / Human Factors Group, France

The nexus between OSH and subcontracting

Isabel L. Nunes^{a,b}

^aDepartment of Industrial and Mechanical Engineering, New University of Lisbon, Portugal ^bCenter of Technology and Systems, UNINOVA, Portugal

Ergonomics and Quality – An Ergonomic Quality Assessment Model for the Work Station Using the Parameters Established under the Brazilian Regulations on Ergonomics (NR-17)

Carlos Maurício Duque dos Santos and Pedro Luiz Oliveira Costa Neto

Paulista University – UNIP, Brazil

Identification of non-technical skills from the resilience engineering perspective: a case study of an electricity distributor

Priscila Wachs^a, Angela Weber Righi^a and Tarcisio Abreu Saurin^a

^aIndustrial Engineering and Transportation Department, Federal University of Rio Grande do Sul, Brazil

STRUTURING OF MANUAL OF ORIENTATIONS AND TECHNICAL INFORMATION FOR LAUNDRIES OF INDUSTRIES OF ANIMAL PRODUCTS ORIGIN

Vania Eugênia da Silva^a, Simone Caldas Tavares Mafra^b, Cláudio Lísias Mafra^c e Amaury Paulo de Souza^d

^{a,b}Departament of Home Economics, Federal University of Vicosa, Brazil ^cDepartament of Biochemistry and Molecular Biology, Federal University of Vicosa, Brazil ^dDepartament of Engineer Forest, Federal University of Vicosa, Brazil

Date: 15/02
Room: 12
Time: 01:00 – 02:30pm

S-Saf&Hth 07 - Special Populations

ERGOBERÇO[®] (Ergonomics Crib)- Evaluation of the prototype for a adaptation to safety's variables and comfort

Simone Caldas Tavares Mafra^a, Vania Eugênia da Silva^b and Luciana Aparecida de Oliveira^b

^{a,b} *Federal University of Viçosa, Department of Home Economics, Avenue Peter Henri Rolfs, s/n, 36570-000, Vicosa, State of Minas Gerais, Brazil.*

Exploring Functions of the Lost Seeking Devices for People with Dementia

Yung-Ching Chen^a, Chergng-Yee Leung^b

^aTatung University, Taiwan ^bThe Department of Industrial Design, Tatung University, Taiwan

IMPACT OF CONDUCTIVE ENVIRONMENT ON KNOWLEDGE OF MOTHER'S REGARDING CHILD CARE
Tiwari, G; Rathore, H; Brijwasi, K; SINGH, S1 (não tinha instituição)

Ergonomic aspects of design of a cap with electronic obstacle detector for use by visually impaired people
Nascimento, N; Salvado, L; Borges, F
Beira Interior University, Federal Institute of Paraiba – Brazil

From 'human being' to 'social subject': "unfreezing" ergonomics and the implications for understanding and intervening health-disease process
Karen Lange Morales^{a,b}, and Gabriel García-Acosta^{a,c}
^aMIMAPRO Research Group – National University of Colombia, Colombia ^bDarmstadt University of Technology, Germany ^cPolytechnic University of Catalonia, Spain

Date: 15/02
Room: 12
Time: 02:30 – 04:00pm

S-Saf&Hth 08 - Workers' Health

Risk evaluation and exposure control of mineral dust containing free crystalline silica: a study case at a quarry in the Recife Metropolitan Area
Lira, Mario^a, Kohlman Rabbani, E^b, Barkokébas Junior, Beda^c, Lago, Eliane^d.
^aUniversity of Pernambuco, Brazil ^bUniversity of Pernambuco, Brazil ^cUniversity of Pernambuco, Brazil
^dUniversity of Pernambuco, Brazil

Design for worksystem safety using employees' perception about safety
Maiti, J^a
^aDepartment of Industrial Engineering and Management, Indian Institute of Technology Kharagpur, India

Forum: social network for the surveillance and prevention of workplace accidents
Vilela, RAG¹; Almeida, IM²; Nunes da Silva, A³; Gomes, MHP³; Prado, H³; Buoso, E³; Dias, MD²; Cavalcante, S¹; Lacorte, LE¹
¹São Paulo University, Brazil; ²Botucatu School of Medicine, UNESP – Brazil; ³Cerest Piracicaba – Brazil

Ports of Mucuripe and Pecém, Ceará, Brazil: restructuring process and its impact on workers' health
Regina Heloisa Maciel^a, Marselle Fernandes Fontenelle^a, Rosemary Cavalcante Gonçalves^a, Taise Araújo Lopes^a, Tuany Maria Sousa Moura^a, Felipe Mendes Monteiro^a
^aUniversity of Fortaleza, Brazil.

From prescribed to real rotations: a means of collective protection for the health of workers in a soft drink factory
R. Simões^a, F. Daniellou^a and A. Nascimento^b
^aUniversiy Bordeaux 2, France. ^bNational Conservatory of Arts and Crafts (Cnam), France

Date: 15/02
Room: 12
Time: 04:30 – 06:00pm

S-Saf&Hth 09 - Human Factors and Ergonomics and Safety

Accidents related to the use of products and services in the city of São Luis, Brazil

Líssia Maria De Souza Dias^a, Raimundo Lopes Diniz^b and Lia Buarque de Macedo Guimarães^c

^aSanta Terezinha College, Brazil ^bDepartment of Design and Technology, Federal University of Maranhão, Brazil ^cFederal University of Rio Grande do Sul, Brazil

Tragedy on grade crossing: driver failure or systemic fragility?

Manoela Gomes Reis Lopes^{a,b}, Rodolfo Andrade de Gouveia Vilela^b, Ildeberto Muniz de Almeida^c, Odilamar Lopes Mioto^d, Mara Alice Batista Conti Takahashi^e and Fernanda Oliveira Perin^b

^aUniversity of São Paulo – FSP/USP, Brazil ^bEnvironmental Health Department, FSP/USP, Brazil ^cPublic Health Department, Paulista State University -UNESP, Brazil ^dWorkers' Health Program (PST- Americana), Brazil ^eReference Center for Workers' Health (CEREST Piracicaba), Brazil

Human factors identification and classification related to accidents' causality on hand injuries in the manufacturing industry

Rosa María Reyes-Martínez¹, Aide Maldonado-Macías^{a,b} and Lilia Roselia Prado-León^c

^aJuarez Institute of Technology, Juárez, Mexico ^bIndustrial Engineering Department, Autonomous University of Juárez City, Mexico ^cUniversity of City of Guadalajara, Mexico.

Control Centers Design for Ergonomics and Safety

Leonardo Quintana^a, Cesar Lizarazo^b, Oscar Bernal^b, Jorge Cordoba^b, Claudia Arias^b, Magda Monroy^b Carlos Cotrino^c, Olga Montoya^c.

^aJaveriana University, Colombia ^bJaveriana University, Colombia ^cElectronics Department, Javeriana University, Colombia

Methodological Proposal for Occupational Health and Safety Actions in Research Laboratories with Nanotechnologies Activities

Luís Renato Balbão Andrade^a and Fernando Gonçalves Amaral^b

^aFUNDACENTRO – Employment and Working Ministry, Brazil. ^bProduction Engineering and Transportation Department, Federal University of Rio Grande do Sul, Brazil.

Date: 16/02

Room: 14

Time: 01:00 – 02:30pm

S-Saf&Hth 10 - Workplace Safety

Perceptual load in central and peripheral regions and its effects on driving performance: Advertizing billboards

Hadas Marciano and Yaffa Yeshurun

Psychology Department, University of Haifa, Israel.

Effects of pushing height on trunk posture and trunk muscle activity when a cart suddenly starts or stops moving

Yun-Ju Lee^a, Marco J.M. Hoozemans^a and Jaap H. van Dieën^a

^aResearch Institute MOVE, VU University Amsterdam, The Netherlands

Cognitive structure of occupational risks represented by a perceptual map

Cardoso-Junior, M.M.^a and Scarpel, R.A.^b

^aTechnological Institute of Aeronautics, Brazil ^bDepartment of Industrial Organization, Technological Institute of Aeronautics, Brazil

Safety illusion and error trap in a collectively-operated machine accident

Ildeberto Muniz de Almeida^a, Hildeberto Nobre Jr^b, Maria Dionísia do Amaral Dias^a, Rodolfo Andrade Gouveia Vilela^c

^aPaulista State University, Brazil. ^bMinistério do Trabalho e Emprego, Brazil. ^cEnvironmental Health Department, University of São Paulo, Brazil.

Human error assessment in electric power company of Serbia

Evica Stojiljkovic^a, Miroljub Grozdanovic^b and Predrag Stojiljkovic^c

^{a,b}University of Nis, Serbia, ^cEconomic Association for Electric Energy distribution "Jugoistok" d.o.o Nis, Serbia

Understanding safety culture by visualization of scenarios – development and evaluation of an interactive prototype

Mikael Blomé^a and Åsa Ek^a

^aDepartment of Design Sciences, Lund University, Sweden

Date: 16/02

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Time: 02:30 – 04:00pm

S-Saf&Hth 11 - Safety

Efficient and effective learning for safety from incidents

Roland Akselsson^{a,b,c}, Anders Jacobsson^{a,b}, Marcus Börjesson^d, Åsa Ek^{a,b,c} and Ann Enander^d

^aDepartment of Design Sciences, Lund University, Sweden ^bLund University, Sweden ^cLund University, Sweden ^dDepartment of Leadership and Management, Swedish National Defence College Karlstad, Sweden

Planning crowd events to achieve high participant satisfaction

Victoria L. Kendrick, Roger A. Haslam and Patrick E. Waterson

Loughborough University, United Kingdom

Recovery and detachment between shifts, and fatigue during a twelve-hour shift

Christian Korunka, Bettina Kubicek, Roman Prem and Antonio Cvitan

University of Vienna, Austria

How to increase safety in complex systems – an ongoing project

Håkan Alm*, Anita Gärling, Sara Saellström Bonnevier and Mats Danielsson

* Department of Human Work Sciences, Luleå University of Technology, Sweden.

Different roles in the quest for system resilience

Fábio Moraes Borges^a, Nilton Luiz Menegon^b

^aDepartment of Industrial Engineering, University of Paraíba, Brazil ^bDepartment of Industrial Engineering, University of São Carlos, Brazil

Circuit Board Accident – Organizational Dimension Hidden by Prescribed Safety

Ildeberto Muniz de Almeida^a; Eduardo Buoso^c, Maria Dionísia do Amaral Dias^a, Rodolfo Andrade Gouveia Vilela^b;

^aPaulista State University, Department of Public Health, Brazil ^bEnvironmental Health Department, University of São Paulo (USP), Brazil ^cCerest Piracicaba, Brazil

Date: 16/02
Room: 15
Time: 01:00 – 02:30pm

S-Saf&Hth 12 - Potpourri of Ergonomic Issues 1

Neck muscle myoelectrical activity measured by electromyography while wearing safety helmets on three different head positions

de la Teja, G ; Mejia, G

Autonomous University of Ciudad Juárez – Mexico

Human reliability and ergonomics: a literature review from 1963 to 2011

João Alexandre Pinheiro Silva^{a,b}, Nilton Luis Menegon^b and Marly Monteiro de Carvalho^c

^aProduction Engineering Department, Escola Superior of Engineering and Management, Brazil ^bProduction Engineering Department, Federal University of São Carlos, Brazil ^cProduction Engineering Department, University of São Paulo, Brazil

An auditive protection for professional musicians

Paula Emanuela Fernandes Cândido ^a, Eugenio Andrés Díaz Merino ^a and Leila Amaral Gontijo ^a.

^aDepartment of Production Engineering and Systems, Federal University of Santa Catarina, Brazil

Study on the impact of exposure to noise in professional snipers

Barkokebas Junior, B. ^a; Lago, E ^a; Vasconcelos, B. ^a; Oliveira, E ^a.

^aUniversity of Pernambuco – Brazil.

An Exploratory Study on the Conditions of Health, Safety and Environmental affairs of Very Small and Small-size Enterprises in Brazil

Carlos André Vaz Junior^a, Roberto de Araujo Mendonça^b and Cláudia do Rosário Vaz Morgado^b

^aDepartment of Chemistry Engineering, Federal University of Rio de Janeiro, Brazil ^bPolytechnic School, Federal University of Rio de Janeiro, Brazil.

Contributions of participatory ergonomics to the improvement of safety culture in an industrial context

Carine Lallemand^a

^aService Sciences and Innovation Department, Public Research Centre Henri Tudor, Luxembourg

Date: 16/02
Room: 15
Time: 02:30 – 04:00pm

S-Saf&Hth 13 - Potpourri of Ergonomic Issues 2

Mapping of noise impact provoked by the execution of foundation piles at high rise building sites

Adolpho Guido de Araújo^a, Alexandre Duarte Gusmão^b, Emilia Rahnemay Kohman Rabbani^c and Stela Paulino Fucale^d

^aUniversity of Pernambuco, Brazil ^bUniversity of Pernambuco, Brazil ^cUniversity of Pernambuco, Brazil ^dUniversity of Pernambuco, Brazil

Ergonomic Work Analysis as a tool of prevention for the Occupational Safety and Health Management System

Verônica de Miranda Prottes^a, Nádia Cristina Oliveira^a and Alessandra Barbosa de Oliveira Andrade^b

^aPitágoras College, Brazil ^bBioergo Ergonomics Consulting Company, Brazil

Cognition and asynchronous distribution between human and machine building accidents

Edgard Martins¹; Marcelo Soares²; Lia Augusto³; Laura Martins²

¹Department of de Design, Federal University of Pernambuco, Brazil ²Department of Design, Federal University of Pernambuco, Brazil ³FIOCRUZ ³Aggeu Magalhães Research Center, Brazil

Parachuting harnesses comparative evaluation on energy distribution grids

Paula Karina Hemberger^a, Ângela Regina Poletto^b and Leila Amaral Gontijo^c

^aFederal University of Santa Catarina, Brazil ^bFederal Institute of Santa Catarina, Brazil ^cFederal University of Santa Catarina, Brazil

How to evaluate the risks of work equipment and installations for health and safety? Research and activities of the German Committee for Plant Safety and consequences for regulation

Pieper R^{a,b}

^aInstitute of Occupational Health, Safety and Ergonomics (ASER), Germany ^bSpecial inspections for work equipment, German Committee for Plant Safety, Germany

Human reliability in petrochemical industry: an action research

João Alexandre Pinheiro Silva^{a,b} and João Alberto Camarotto^b

^aProduction Engineering Department, Escola Superior of Engineering and Management, Brazil ^bProduction Engineering Department, Federal University of São Carlos, Brazil

Area – Slips, Trips and Falls

Chair: Wen-Ruey Chang, Liberty Mutual Research Institute for Safety - USA

Date: 16/02

Room: 13

Time: 01:00 – 02:30pm

S-STF 01 - Slips and Falls

Chair: Wen-Ruey Chang

Effect of shoe type on descending a curb

Juff George^a, Michelle Heller^a and Michael Kuzel^b

^a Exponent, Inc., USA ^b Exponent, Inc., USA

Thousands of slip injuries can be prevented... we need step change in floor safety

Stewart, A

SlipAlert LLP – United Kingdom

Forensic human factors analysis of slip and fall incidents

Fischer, T ; Fischer, J

Fischer Forensic Services – USA

Fundamental study on relationship between human injury probability due to fall and the fall height

Yasumichi HINO^a

^aNational Institute of Occupational Safety and Health JAPAN, JAPAN

Measuring step geometry using the Nose-to-Nose method: Validity and repeatability

Daniel Johnson^a, Gary Sloan^b

^aDaniel A. Johnson, Inc., U.S.A. ^bGary Sloan

Forensic Human Factors, U.S.A

Date: 16/02

Room: 13

Time: 02:30 – 04:00pm

S-STF 02 - Slips, Trips & Falls: Footwear and Walking Surfaces

Chair: Daniel Johnson

Assessment of slip resistance under footwear materials, tread designs, floor contamination, and floor inclination conditions

Kai Way Li^{a*}, Chih-Yong Chen^b, Ching Chung Chen^c, Liwen Liu^b

^aDepartment of Industrial Management, Chung Hua University, Taiwan ^bInstitute of Occupational Safety and Health, Taiwan ^cDepartment of Information Management, Hsing Wu College, Taiwan

Effect of walking surface perturbation training on slip propensity and local dynamic stability

Jian Liu^a and Sukwon Kim^b

^aDepartment of Health and Human Performance, University of Houston, USA ^bDepartment of Physical Education, Chonbuk Normal University, South Korea

The development of a Universal Approach to Testing of Walkway Slip Resistance in the U.S.

James Flynn, PE ^a, Steven Di Pilla, ARM, CXLT ^b and Keith Vidal PE, CXLT ^c

^aJ2 Engineering, USA ^bESIS Health, Safety & Environmental, USA ^cVidal Engineering St Louis, USA

Stair safety: Bottom of flight illusion

Daniel Johnson

Daniel A. Johnson, Inc., U.S.A.

The stochastic distribution of available coefficient of friction on quarry tiles for human locomotion

Wen-Ruey Chang, Simon Matz and Chien-Chi Chang

Liberty Mutual Research Institute for Safety, USA

Review of Walking Hazards for Railroad Workers

Robert O. Andres, Ph.D., CPE^a, Chip Wade, Ph.D., CPE^b

^aErgonomic Engineering, Inc., USA ^bDepartment of Industrial and Systems Engineering, Auburn University, USA

Area – Visual Ergonomics

Chair: Magne Helland, Buskerud University College - Norway

Co-chair: Hans O. Richter, University of Gavle - Sweden

Date: 16/02

Room: 07

Time: 01:00 – 02:30pm

S-VisErgo 01 - General aspects

Applying research to practice: Generalist and specialist (visual ergonomics) consultancy

Jennifer Long^{a,b} and Airdrie Long^c

^aJennifer Long Visual Ergonomics, Australia ^bUniversity of New South Wales Sydney, Australia ^cConsidered Solutions, Australia

Temporal aspects of increases in eye-neck activation levels during visually deficient near work

Hans O. Richter^a, Lodin Camilla^a and Mikael Forsman^{a,b}

^aDepartment of Occupational and Public Health Sciences, University of Gävle, Sweden. ^bDepartment of Public Health Sciences, Karolinska Institute, Sweden.

Lighting old Age – How lighting impacts the ability to grow old in own housing, part one.

Gunnar Horgen, Professor (PhD) ^a, Grethe Eilertsen, Associate professor (PhD) ^b, and Helle Falkenberg, Associate professor (PhD) ^a

^aDepartment of Optometry and visual science, Buskerud University College, Norway ^bDepartment of Health, Buskerud University College, Norway

Eye- and neck/shoulder-discomfort during visually demanding experimental near work

Camilla Lodin^a, Mikael Forsman^{a,b} and Hans Richter^a

^aDepartment of Occupational and Public Health Sciences, University of Gävle, Sweden. ^bDepartment of Public Health Sciences, Karolinska Institute, Sweden.

Co-variation in time between Near-Far accommodation of the lens and trapezius muscle activity

Mikael Forsman^{a,b}, Camilla Lodin^b, and Hans Richter^b

^aDepartment of Public Health Sciences, Karolinska Institute, Sweden. ^bDepartment of Occupational and Public Health Sciences, University of Gävle, Sweden.

Graphic and cultural aspects of pictograms: an information ergonomics viewpoint

Carla Galvão Spinillo

Department of Design, Federal University of Paraná, Brazil

Date: 16/02

Room: 07

Time: 02:30 – 04:00pm

S-VisErgo 02 - Task specific aspects

Chair: Hans Richter

A Study of Subjective Visual Disturbances in Jewellery Manufacturing

Amitabha De ¹, Dhar U. ¹, Virkar T. ¹, Altekar C. ¹, Mishra W. ¹, Parmar V. ¹, M. Mutakekar ¹, Rauf Iqbal¹ and A.M.Chandra ²

¹National Institute of Industrial Engineering (NITIE), India ²Department of Physiology, University of Calcutta, India

Application of digital human modeling and simulation for vision analysis of pilots in a jet aircraft: A case study

Sougata Karmakar^a, Madhu Sudan Pal^b, Deepti Majumdar^b and Dhurjati Majumdar^b

^aDepartment of Design, Indian Institute of Technology (IIT) Guwahati, India. ^bMin. of Defence, India.

Operative strategies of HLB's scouts of a citrus property within the State of Sao Paulo, Brazil

Glauca Helena Gonçalves^a, Nilton Luiz Menegon^a

^aProduction Engineering Department, Federal University of São Carlos, Brazil

Ergonomic analysis of safety signs: a focus of informational and cultural ergonomics

Janaina Cavalcanti^a and Marcelo Soares^b

^aDepartment of Design, Federal University of Pernambuco, Brazil ^bDepartment of Design, Federal University of Pernambuco, Brazil.

Visual ergonomics interventions in mail
sorting facilities

H. Hemphälä^a, G-Å. Hansson^b, C. Dahlgvist^b and J. Eklund^c

^aLund University, Sweden ^bUniversity Hospital, Sweden ^cRoyal Institute of Technology, Sweden

Point Navigation Map method to track low-income mobile user's interaction

^aABREU, Leonardo and ^bMORAES, Anamaria de

^aESPM/Pontifical Catholic University of Rio de Janeiro, Brazil ^bPontifical Catholic University of Rio de Janeiro, Brazil

Area – Work with Computer Systems

Chair: Christopher Schlick, Institute of Industrial Engineering and Ergonomics - Germany

Co-Chair: Allan Toomingas, Institute of Environmental Medicine, Unit of Occupational Medicine - Sweden

Date: 13/02

Room: 02

Time: 04:30 – 06:00pm

S-WWCS 01 - Ergonomic Design and Evaluation of Complex Computer Systems 1

Dosvox Usability: recommendations for improving interaction of blind people with the Web using the system

Edson Rufino de Souza^{a,b} and Sydney Fernandes de Freitas^b

^aNational Institute of Industrial Property, Brazil ^bPPDESIGN, ESDI/UERJ, Brazil

About authentication, security, password re-set features and users behaviors in using web application

Moallem, A

San Jose State University - USA

Cognitively Automated Assembly Processes: A Simulation Based Evaluation of Performance

Marcel Ph. Mayer, Barbara Odenthal, Marco Faber and Christopher M. Schlick

RWTH Aachen University, Germany

Usability and Decision Support Systems in Emergency Management

Mats Danielsson* and Håkan Alm

*Luleå University of Technology, Sweden.

State of the (net)work address Developing criteria for applying social networking to the work environment

André Calero Valdez^a, Anne Kathrin Schaar^a and Martina Ziefle^a

^aRWTH Aachen University, Germany

A Method for Work Modeling at Complex Systems: towards applying information systems in family health care units

Alessandro Jatobá^a, Paulo Victor R. de Carvalho^b Amauri Marques da Cunha^b

^aNational School of Public Health/Oswaldo Cruz Foundation ^bFederal University of Rio de Janeiro, Brazil

Date: 14/02

Room: 14

Time: 01:00 – 02:30pm

S-WWCS 02 - Ergonomic Design and Evaluation of Complex Computer Systems 2

Development of an Expert System for Abnormal Operating Procedures in a Main Control Room
Min-Han Hsieh^a, Sheue-Ling Hwang^a, Kang-Hong Liu^a, Sheau-Farn Max Liang^b, Chang-Fu Chuang^c
^aNational Tsing Hua University, Taiwan ^bNational Taipei University of Technology, Taiwan ^cAtomic Energy Council, Taiwan

The Influence of the Modality of Tele-cooperation on Performance and Workload
Thomas Alexander, Claudius Pfendler, Jürgen Thun and Michael Kleiber
Fraunhofer-Institute for Communication, Information Processing, and Ergonomics (FKIE), Germany

Use of graphical modality in a collaborative design distant setting
Stéphane Safin^a, Roland Juchmes^a, Pierre Leclercq^a
^aUniversity of Liège, Belgium

Invisible computer for collaborative design : evaluation of a multimodal sketch-based environment
Aurore Defays^a, Stéphane Safin^b, Françoise Darses^c, Anaïs Mayeur^c, Samia Ben Rajeb^d, Caroline Lecourtois^d,
François Guéna^d and Pierre Leclercq^b
^aUniversity of Liège, Belgium. ^bUniversity of Liège, Belgium. ^cUniversity of Paris-Sud, France.
^dEcole Nationale Supérieure of Architecture of Paris La Vilette, France.

Online advertising and usability: the effect of six types of banner in the process of viewing and
remembrance of the ads message
Brandão, E ; Moraes, A
Pontifical Catholic University of Rio de Janeiro – Brazil

Visual Social Network Analysis: Effective Approach to Model Complex Human Social, Behaviour & Culture
Tareq Z. Ahram^{a,b}, Waldemar Karwowski^{a,b}
^aUniversity of Central Florida, USA ^bDepartment of Industrial Engineering and Management Systems,
University of Central Florida, USA

Date: 14/02
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Time: 02:30 – 04:00pm

S-WWCS 03 - Ergonomic Interface Design for Computer Users

Online epistemic communities: theoretical and methodological directions for understanding knowledge co-
elaboration in new digital spaces
Françoise Détienne^a, Flore Barcellini^b, Michael Baker^a, Jean-Marie Burkhardt^c, Dominique Fréard^a
^aTelecom ParisTech, France ^bCRTD, CNAM, Paris, France ^cUniversity Paris Descartes, Boulogne Billancourt,
France

Design Recommendations for the Creation of Icons for the Elderly
Alexander Mertens, Christopher Brandl, Philipp Przybysz, David Koch-Körffges and Christopher M. Schlick
RWTH Aachen University, Germany

Bivariate pointing movements on large touch screens: Investigating the validity of a refined Fitts' Law
Jennifer Bützler, Sebastian Vetter, Nicole Jochems and Christopher M. Schlick
RWTH Aachen University, Germany

How can multimodality be used to design usable interfaces in IPS² for older employees?
Ulrike Schmuntzsch^a, Christine Sturm^a and Matthias Roetting^a
^aDepartment of Psychology and Ergonomics, Technical University of Berlin, Germany

Computer Acceptance of Older Adults
Sibylle Nägle and Ludger Schmidt
University of Kassel, Germany

Training Users to Counteract Phishing
Christopher B. Mayhorn^a and Patrick G. Nyeste^a
^aDepartment of Psychology, North Carolina State University, USA

Date: 14/02
Room: 14
Time: 04:30 – 06:00pm

S-WWCS 04 - Visual Ergonomics at Computer Work (Joint Session TC WWCS and TC Visual Ergonomics)

Effects of screen filter on visibility of alphanumeric presentation on CRT and LCD monitors
Aleksandar Zunjic, Ljiljana Ristic and Dragan D. Milanovic
University of Belgrade, Serbia

Incidence and risk factors for symptoms from the eyes among professional computer users
Toomingas A^{a,b}, Hagberg M^c, Heiden M^b, Richter H^b, Westergren KE^b and Wigaeus Tornqvist E^{b,d}
^aKarolinska Institute, Sweden ^bUniversity of Gävle, Sweden ^cOccupational & Environmental Medicine
University of Gothenburg, Sweden ^dJönköping University, Sweden

VDU work stations and vision in post office and bank operators
Cheikh El- Bachir TEBBOUNE^a, Bouhafs MEBARKI^b
^aUniversity of Oran, Algeria. ^bUniversity of Oran, Algeria.

Risk factors for computer visual syndrome (CVS) among operators of two call centers in São Paulo, Brazil
Eduardo Costa Sa^{a,c}, Mario Ferreira Junior^b, Lys Esther Rocha^a
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Visual challenges using Visual Display Units (VDU) in office landscapes
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Visual ergonomics and computer work – is it all about computer glasses?
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