

ACED Oral Presentation

**June 3 (Sat) 9:00~10:00**

Room G: 39-402

Biomechanics

Chairperson: Akihiko Seo (Tokyo Metropolitan University)

- G1-1 Comparison of muscle adaptation toward assistive force between the young and elderly. ○ Nursalbiah Nasir (Kyushu University, Universiti Teknologi MARA), Keisuke Hayashi, Ping Yeap Loh, Satoshi Muraki (Kyushu University)
- G1-2 Influence of different modes of load carriage on lower limb biomechanics of industrial workers. ○ Rauf Iqbal, Arundhati Guha Thakurta (National Institute of Industrial Engineering (NITIE))

**June 3 (Sat) 10:10~11:10**

Room B: 39-601

Product Design / Universal Design

Chairperson: Satoshi Muraki (Kyushu University)

- B2-1 Effect of the accuracy of 3D head scanners in product design development ○ Yan Luximon, Parth Shah (The Hong Kong Polytechnic University)
- B2-2 Creating an Ergonomic Workplace by Design ○ Justine M.Y. CHIM (Chim's Ergonomics and Safety Limited)
- B2-3 Risk Assessment of Two Care Bed Structures in lateral Rollover Tasks ○ Wang Qi, Zhou Zhiyong (Shanghai Dianji University of China)
- B2-4 Human Factor Ergonomics Considerations For A Glucose Sensor Device ○ Soo Li Choong, Muhamad Ai'dil Abd Rahman, Khairul Nazri Abd Wahib (MIMOS Semiconductor (M) Sdn Bhd)

Room D : 39-502

Health Care I

Chairperson: Alma Maria Jennifer Areopagita Gutierrez (De La Salle University)

- D2-1 L4/L5 disc compression force in phases of manual human handling ○Chanya Jiemjai, Naris Charoenporn, Santhanee Khruakhorn, Patcharee Kooncumchoo, Santhanee Khruakhorn, Patcharee Kooncumchoo (Thammasat University)
- D2-2 Smart Walkers from an Ergonomics Perspective: A Review ○Wen Liang Yeoh (Kyushu University), Ping Yeap Loh (Kyushu University, Japan. Research Fellow of Japan Society for the Promotion of Science), Satoshi Muraki (Kyushu University, Japan.)
- D2-3 Ergonomic Management and Muscle Strengthening in Thai Aged Farmers with Knee Osteoarthritis ○Sangarun Isaramalai, Kanokwan Hounsri, Chanon Kongkamon, Pornit Wattanapisitkul, Napaporn Tangadulrat, Tippawan Kaewmanee, Varah Yuenyongviwat (Prince of Songkhla University)
- D2-4 Ultrasound Workstation Analysis of De La Salle University Medical Center ○Alma Maria Jennifer Areopagita Gutierrez, Jan Arah Yvone Asensi, Denise Geraldine Chua, Charlene Zarah Sayson (De La Salle University)



**Room F: 39-401**

**HCI I**

**Chairperson: Myung Hwan Yun (Seoul National University)**

- F3-1 Effects of Controller and Body Posture On Simulator Sickness and Visual Fatigue in Virtual Reality ○Bingcheng Wang, Pei-Luen Patrick Rau, Lili Dong (Tsinghua University)
- F3-2 Neck Pain and Physical Fitness among Office Workers ○Chanakarn Meechoovet, Wattana Jalayondeja, Chutima Jalayondeja, Benjawan Apinonkul (Mahidol University)
- F3-3 Physical activity, sitting time and work-related musculoskeletal disorders in computer workers ○Kanya Wongwitwichote, Wattana Jalayondeja, Keerin Mekhora, Chutima Jalayondeja (Mahidol University)

**Room G: 39-402**

**Ergonomics in Manufacturing**

**Chairperson: Macky Kato (Waseda University)**

- G3-1 From the Point of a Tower Crane Operator's View: Use of an Eye-Tracker in Construction Sites ○Berna H. Ulutas, N.Firat Ozkan (Eskisehir Osmangazi University)
- G3-2 Assessment of Risk Factors of Upper-limb Musculoskeletal Disorders in a Chicken Slaughterhouse ○Diogo Cunha dos Reis, Adriana Seára Tirloni, Eliane Ramos, Antônio Renato Pereira Moro (Federal University of Santa Catarina)
- G3-3 Ergonomic Hazard Identification on Musculoskeletal Discomfort among Electronic Workers in Thailand ○Teeraphun Kaewdok, Sasitorn Taptagaporn (Thammasat University)
- G3-4 Musculoskeletal Discomforts among Assembly Team Members performing Assembly Welding Task ○Fazilah Abdul Aziz, Zakri Ghazalli, Nik Mohd Zuki Nik Mohamed (University Malaysia Pahang), Amri Isfar (Ingress Technologies Sdn Bhd.), Nurul Shahida Mohd Shalahim (University Malaysia Pahang)

**June 3 (Sat) 15:50~16:50**

**Room B: 39-601**

**Service Design II**

**Chairperson: Miwa Nakanishi (Keio University)**

- B4-1 Analysis of the optimal ranges of tilting angles for vertically arranged displays ○Yong Min Kim, Ye Lim Rhie, Kyung-Jun Lee (Seoul National University), Ilsun Rhiu (Hoseo University), Myong Hwan Ahn (LIG Nex1), Myung Hwan Yun (Seoul National University)
- B4-2 Jugaad: A conventional formula to solve problems of people living in rural India ○Reenu Singh, Rauf Iqbal, A.K. Pundir (NITIE)
- B4-3 Study of the conditions and the measures of rational consideration to students in the university of Kyoto Institute of Technology ○Yujiro Ishikawa, Masayoshi Kubo (The University of Kyoto)

**Room D: 39-502**

**Health Care III**

**Chairperson: Kazuo Aoki (Nihon University)**

- D4-1 How acute stress alters cognitive flexibility? The electrophysiological evidences ○Caihong Jiang, Pei-Luen Patrick Rau (Tsinghua University)
- D4-2 Investigation of the Physical Ergonomic Conditions of the Operating Rooms in the Province of Izmir ○Kübra Yasak, Fatma Vural (Dokuz Eylül University)
- D4-3 Perceived Individual and Environmental Factors For Physical Activity Participation among Office Workers ○Kuntapol Jarunarkhirun, Chutima Jalayondeja, Benjawan Apinonkul, Supalak Khemthong (Mahidol University)
- D4-4 The effect of visual target contrast on latency and amplitude of saccades ○Toshiki Takada, Kentaro Kotani, Satoshi Suzuki, Takafumi Asao (Kansai University)
- D4-5 Effects of Thai dance on median neural tension, chronaxy, and nerve functions in the people associated with WMSDs. ○Nuttanun Khemamuttanak, Keerin Mekhora, Wattana Jalayondeja, Sirikarn Somprasong (Mahidol University.)

## Room F: 39-401

### HCI II

Chairperson: Mitsuhiro Karashima (Tokai University)

- F4-1 Are curved displays ergonomically advantageous over flat displays? Some positive results from three display curvature studies on monitors and TVs  
○Sungryl Park, Jihhyeon Yi, Donghee Choi, Songil Lee, Gyouhyung Kyung (UNIST)
- F4-2 Developing a Usable Android Launcher to Help Elderly People in Indonesia Use Smartphones  
○Johanna Renny Octavia, Mentari Putri Anindita (Parahyangan Catholic University)
- F4-3 Online Banner Advertising: Effect of Different Animation Speeds on Memory Retention of Gender  
○Bernadette Joy Detera, Floribel Betancor, Monica Angeline Hadi, Alyssa Jean Portus (University of the Philippines Diliman)
- F4-4 The effects of smartphone width on touch performance  
○Seul Chan Lee, Yong Gu Ji (Yonsei University)

## Room G: 39-402

### Transportation

Chairperson: Sadao Horino (Kanagawa University), Keisuke Suzuki (Kagawa University)

- G4-1 A Study of Multi-touch Screen Installation in Vehicles for Single-touch and Gestural Operations  
○Cheng-Jhe Lin, Chueh Chiang (National Taiwan University of Science and Technology)
- G4-2 Ergonomic Assessment of the Point-to-point (P2P) Buses: Case of Passengers  
○Jeric B. Bonostro, Andre A. Borromeo, Carmela Gabrielle D. De Jesus, Danielle Jessa A. Trinidad, Benette P. Custodio (University of the Philippines)
- G4-3 Study on suggestions for people want to use priority seats by inspecting the actual use situation  
○Manami Oba, Masayoshi Kubo (Kyoto Institute of Technology)
- G4-4 Psychological evaluation experiment of driver in self-driving car  
○Atsushi Shimada, Kenta Kawahara, Emiko Kido, Park Shinyoung (Mitsubishi Electric Corporation), Ryoji Yoshitake (Shibaura Institute of Technology)
- G4-5 Road usability for wheelchair users at an international tourist city Kamakura clarified by Kogi data collected by "Rin-Reco" (drive recorder exclusively developed for bicycle)  
○Sadao Horino (Kanagawa University), Kazutaka (Ohara Memorial Research Institute for Labor Science)

**June 3 (Sat) 17:00~18:00**

**Room B: 39-601**

**Affective Design and Service Design**

**Chairperson: Takashi Yokoi (Japan Women's University)**

- B5-1 Integrating Affective Requirements in Car Design Methodologies ○ Rosemary Ruiz Seva (De La Salle University)
- B5-2 Key Emotional Values and Kawaii for Saudi Women ○ Barnawi Enayyah, Michiko Ohkura (Shibaura Institute of Technology)
- B5-3 What Are Students' Perceptions of Design Research and Approaches? ○ Yan Luximon, Kimberly Anne Sheen (The Hong Kong Polytechnic University)
- B5-4 Personal Protective Equipment Design and Ergonomic Work Analysis: Protecting Farm Pineapple Growers ○ Roberto Funes Abrahão, Maria Cristina Gonzaga, Frederico Correia Queiróz, Frederico R.C. Queiróz, Mauro José Andrade Tereso (University of Campinas)

**Room F: 39-401**

**HCI III**

**Chairperson: Rosemary Ruiz Seva (De La Salle University)**

- F5-1 Effects of display curvature and hand length on smart watch touch interaction ○ Jihhyeon Yi, Songil Lee, Sungryul Park, Donghee Choi, Gyouhyung Kyung (UNIST)
- F5-2 Understanding Human Factor Issues of The Shared Control System: a literature review ○ Hyeji Jang, Jiyoung Kwahk, Sung H. Han (POSTECH)
- F5-3 Effectiveness of a Rubber Band for Improving the Usability of a Smartphone ○ Noriyasu HIROKAWA, Yuki SASAKI, Yuki TSUMURA, Tsutomu NISHIGAKI, Mitsushi OHMASA (Kindai University)
- F5-4 Study on Haptic Texture of Buttons for User Interfaces ○ Daiji Kobayashi, Yasuhiro Suzuki (Chitose Institute of Science & Technology)

**June 4 (Sun) 9:00~10:00**

**Room D: 39-502**

**Occupational Health and Safety I**      **Chairperson: Johanna Renny Octavia (Parahyangan Catholic University)**

- D6-1 Association of Individual Risk Factors to Body Discomfort of Filipino Small Scale Gold Miners      ○ Benette Panol Custodio (University of the Philippines)
- D6-2 The Effect of Keyboard Typing on the Median Nerve at the Proximal Carpal Tunnel      ○ Ping Yeap Loh, Wen Liang Yeoh, Satoshi Muraki (Kyushu University)
- D6-3 Evaluation of Safety Behavior and Work-related Injuries among Foreign Construction Workers in Malaysia      ○ Haroun Zerguine, Shamsul Bahri Bin Mohd Tamrin, Juliana Jalaludin (University Putra Malaysia)
- D6-4 Questionnaire for Construction Worker Risk Taking (Q-CWRT) in Hong Kong      ○ Banus K.L. Low, Alan H. S. Chan (City University of Hong Kong)

**Room F: 39-401**

**Usability**      **Chairperson: Takashi Shibata (Tokyo University of Social Welfare)**

- F6-1 Measuring Methods of Luminance Contrast around Tactile Walking Surface Indicators at Stations      ○ Hisato OHNO, Ayako SUZUKI, Naohiro AKIU (Railway Technical Research Institute)
- F6-2 Usability Testing of Online Movie Ticket Reservation in the Philippines      ○ Mary Margaret F. Guzman, Joyce Abigail B. Manaloto, Anthony Dale DR. Senina, Alyssa Jean A. Portus (University of the Philippines)



**Room G: 39-402**

**Virtual Environment**

**Chairperson: Takashi Kawai (Waseda University)**

- G6-1 Analysis of movement and performance of pointing in real and stereoscopic environments ○ Bereket Haile Woldegiorgis (National Taiwan University of Science and Technology, Bahir Dar University), Chiuhsiang Joe Lin (National Taiwan University of Science and Technology)
- G6-2 Behavioral and psychological effects by short time viewing 360 videos using a HMD ○ Yoshihiro Banchi, Shota Tsukada, Keisuke Yoshikawa, Takashi Kawai (Waseda University)
- G6-3 Gazing behavior by viewing virtual heritage using a head-mounted display ○ Sanghyun Kim (Waseda University), Yuichi Uchiyama, Katushito Yagi (Toppan Printing Co., Ltd), Takashi Kawai (Waseda University)

**June 4 (Sun) 10:10~11:10**

**Room D: 39-502**

**Occupational Health and Safety II**

**Chairperson: Hiroyuki Izumi (University of Occupational and Environmental Health)**

- D7-1 A Cyber-Physical Model of Internet of Humans for Productivity and Worker General Welfare ○ Chiuhsiang Joe Lin, Chih-Feng Cheng, Hung-Jen Chen (National Taiwan University of Science and Technology), Yu-Ling Hsu (Institute for Information Industry)
- D7-2 Ergonomic Assessment of the Working Conditions of Checkout Counter Cashiers in a Grocery Store in the Philippines ○ Vann Harold V. Maligaya, Matthew Martin P. Sanchez, Corrine Andreana C. Uy, Alyssa Jean A. Portus (University of the Philippines)
- D7-3 From the Point of a Tower Crane Operator's View: Use of an Eye-Tracker in Construction Sites ○ Berna Ulutas, Necmettin Firat Ozkan (Eskisehir Osmangazi University)

**Room G: 39-402**

**Cognitive Ergonomics I**

**Chairperson: Keiko Kasamatsu (Tokyo Metropolitan University)**

- G7-1 Association between sedentary behavior, metabolic profiles and cognitive function in office workers  
○ Sarun Pritivichakarn, Amporn Nuntapornsak , Tipwadee Bunprajun , Chutima Jalayondeja (Mahidol University)
- G7-2 Evaluation of guiding visual attention using partial stereoscopic images  
○ Kazufumi Oki, Kentaro Kotani, Satoshi Suzuki, Takafumi Asao (Kansai University)
- G7-3 Visual Recognition Assessment of Road Barriers in Metro Manila  
○ Karl T. Baliton, Jannica Angela D. Caballero, Maurice Mitchell C. Rivera, Benette P. Custodio (University of the Philippines)

**June 4 (Sun) 14:40~15:55**

**Room B: 39-601**

**Anthropometry Ergonomics**

**Chairperson: Takeshi Ebara (Nagoya City University)**

- B8-1 An Analysis of Characteristics of Korean Females' Lower Body Shape Using Fuzzy Logic and Classification Methods  
○ Sung Hee Ahn, Donggun Park, Hyung Min Sim, Cherry Yieng Siang Ling, Myung Hwan Yun (Seoul National University)
- B8-2 Ergonomic Design and Assessment of Footbridges for Filipino Children and Elderly  
○ Jehan Laris J. Gutierrez , Emmanuel Jerrico N. Perez, Lainly D. Quilantang, Benette P. Custodio (University of the Philippines - Diliman)
- B8-3 Estimation of Optimal Handrail Position for Elderly based on Digital Human Modeling Simulation  
○ Takanori Chihara (Kanazawa University), Akihiko Seo (Kanazawa University), Jiro Sakamoto (Kanazawa University)
- B8-4 An Ergonomic Study on the Ideal Interior of Jeepneys Based on Anthropometric Measurements of Filipinos  
○ Mikael Konrad Baluyot, Crescent Cuenca, Ma. Sophia Adriel E. Jazmines (University of the Philippines)

**Room D : 39-502**

**Safety**

**Chairperson: Hirotaka Aoki (Tokyo Institute of Technology)**

- D8-1 Association between Non-Reporting of Accident and Contributing Factors in Malaysia's Construction Industry ○ Nur Adilla Ab Hadi, Shamsul Bahri Md , Tamrin, Ng Yee Guan, Vivien How, Rozana Abd Rahman (University Putra Malaysia)
- D8-2 Association between Subjective and Objective Assessment of Fatigue ○ Pornthip Khaengkun, Petcharatana Bhuanantanondh, Keerin Mekhora, Chutima Jalayondeja (Mahidol University)
- D8-3 Malaysia Occupational Safety and Health Status in Agriculture: Overview ○ M.Y. Ishkandar, Yee Guan Ng, B.M.T. Shamsul (Universiti Putra Malaysia)
- D8-4 Sleepiness and Performance among Oil Rig Onshore Shift Workers in Thailand ○ Pokkate Bandidcharoenlert, Petcharatana Bhuanantanondh, Wattana Jalayondeja, Chutima Jalayondeja (Mahidol University)

**Room F : 39-401**

**Interaction**

**Chairperson: Ichiro Kageyama (Nihon University)**

- F8-1 A Study on Flashing Light of Personal Mobility - Focusing on Kansei Evaluation of Blinking Pattern - ○ Wonsuk Yang, Toshiki Matsuo (Shibaura Institute of Technology)
- F8-2 Ergonomic Assessment of Street Warning Signs for the Visually Impaired in Metro Manila ○ Stephanie Lagadia Aganad, Amiel Joyce Rodriguez Bellen, Aenna Mae Agida Magpantay, Kirstie Faye Azul Tabanda, Benette Panol Custodio (University of the Philippines Diliman)
- F8-3 The Effects of Smartphone Edge Display on EMG Activity of Thumb Muscles in One-handed Interaction ○ Min Chul Cha, Hwan Hwangbo, Meen Jong Kim, Yong Gu Ji (Information and Industrial Engineering, Yonsei University)

Room G: 39-402

Cognitive Ergonomics II

Chairperson: Yoshinori Horie (Nihon University)

- G8-1 A Study of the Effect of Steering Force Characteristics on Steering Feel ○ Ikuo Kushiro, Keisuke Suzuki (Kagawa University)
- G8-2 Development of a vigilance test for high mental workload ○ Ying-Yin Huang (Taipei Tech), Marino Menozzi (ETH Zurich), Caroline Favey (University of Neuchâtel)
- G8-3 Relationship between accelerator/brake position and pedal misapplication ○ Jun Arakawa (Graduate School of Kansai University), Kentaro Kotani, Satoshi Suzuki, Takafumi Asao (Kansai University)
- G8-4 The effect of pictorial face images for observational rating of perceived exertion ○ Ding-Hau Huang (Ming Chi University of Technology), Wen-Ko Chiou (Chang Gung University)