



Asian Workshop on 3D Body Scanning Technologies

Tokyo, Japan, 19-20 April 2011

Organized by HOMETRICA CONSULTING - Dr. Nicola D'Apuzzo www.3dbodyscanning.org/asia

Preliminary Program **THE WORKSHOP HAS BEEN CANCELED**

Tuesday 19th April 2011

08:00-09:00 **Registration** – Welcome desk

09:00-10:00 **Opening Session** – Conference Room



Welcome speech from the workshop director
Nicola D'APUZZO
Hometrica Consulting, Zurich/Ascona, Switzerland



Body surface deformation modeling for sports garment design (#20)
Masaaki MOCHIMARU^a, Sang-Il PARK^b
^a Digital Human Research Center, AIST, Tokyo, Japan
^b Sejong University, Seoul, South Korea



Latest innovations in 3D and 4D medical simulation technology (#40)
Chris LANE
3dMD LLC, Atlanta (GA), USA

10:00-10:30 **Coffee Break**

10:30-12:00 **Technical Session 1: Body Scanning for Apparel I** – Conference Room



i-Fashion implementation with 3D body scanning system (#30)
Chang Kyu PARK, Yongsoo Park
i-Fashion Technology Center, Konkuk University, Seoul, Korea



iSize - The new international online-portal for size and fit optimization in worldwide markets (#38)
Rainer TRIEB, Anke RISSIEK
Human Solutions GmbH, Germany



3D body scanning method for close-fitting garments in sport and medical applications (#35)
Olga TROYNIKOV and E. ASHAYERI
School of Fashion and Textiles, RMIT University, Brunswick, Australia



An online fitting simulation system of a garment using 3D body data (#25)
Ran CHOI, Chang-Suk CHO
Dept. of Digital Convergence, Hanshin University, Gyeonggi-do, Korea

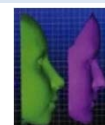


12:00-13:30 **Lunch Break**

13:30-15:00 **Technical Session 2: Body Scanning for Medicine and Health** – Conference Room



Keynote presentation:
Three-dimensional imaging for orthodontics and maxillofacial surgery (#16)
Chung How KAU
Department of Orthodontics and Dentofacial Orthopedics, University of Alabama at Birmingham, USA



Deploying reconfigurable 3D scanning for complex anatomical measurements (#15)
Chris LANE
3dMD LLC, Atlanta (GA), USA



Analysis of foot shape features using multi-dimensional scaling method for classification of foot type in elderly with hallux valgus (#19)
SungHyek KIM
Health Science University, Yamanashi, Japan

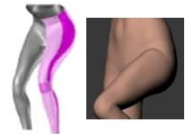


15:00-15:30 **Coffee Break**

15:30-17:00 **Technical Session 3: 3D Body Modeling and Avatars – Conference Room**



Automated generation of human models from scan data in anatomically correct Postures for rapid development of close-fitting, functional garments (#03)
Christine MEIXNER, Sybille KRZYWINSKI, Hartmut ROEDEL
ITM - Institut fuer Textilmaschinen und textile Hochleistungswerkstofftechnik, TU Dresden, Germany



Web-based human body modeling by restricted number of anthropometric data (#18)
Igor GONCHARENKO^a, Heihachi UEKI^a, Katsuaki TAKASHIBA^a, Masaaki MOCHIMARU^b, Makiko KOUCHI^b, Satoko USUI^c, Masakazu ODAHARA^c
^a I-Net Corp., Tokyo, Japan
^b AIST, Tokyo, Japan
^c Nihon Unisys Ltd., Tokyo, Japan



Body trunk shape estimation from silhouettes by using homologous human body model (#06)
Shunta SAITO^a, Makiko KOCHI^b, Masaaki MOCHIMARU^b, Yoshimitsu AOKI^a
^a Keio University, Tokyo, Japan
^b Digital Human Research Center, AIST, Tokyo, Japan



3D Face modeling with passive photogrammetry (#22)
Lorant SZABO
Pantomat Kft., Budapest, Hungary



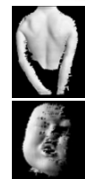
17:00-18:30 **Poster Session – Poster Room**



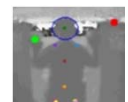
An analysis of digital 3-D body imaging technology (#12)
Shu-Hwa LIN, Kelly MAMMEL
Department of Family & Consumer Sciences, University of Hawaii at Manoa, Honolulu, USA



High-speed human body 3D scanning technique and systems (#26)
Shota KIYOTA^a, Naoki ASADA^c, Ryosuke SAGAWA^b, Ryo FURUKAWA^c, Hiroshi KAWASAKI^a, Yasushi YAGI^d
^a Faculty of Information Science and Biomedical Engineering, Kagoshima University, Japan
^b National Institute of Advanced Industrial Sciences and Technology (AIST), Tokyo, Japan
^c Faculty of Information Science, Hiroshima City University, Japan
^d Institute of Science and Industrial Research, Osaka University, Japan



Automatic measurement of body sizes based on depth camera (#02)
Qiu BO, Ishtiaq Rasool KHAN, Arthur NISWAR
Institute for Infocomm Research (I2R), A-Star, Singapore



A point-structured geometric approach to foot measurements (#21)
Ming J. TSAI, Hung W. LEE, Hsueh Y. LUNG
Department of Mechanical Engineering, National Cheng Kung University, Taiwan



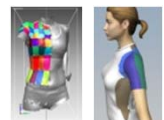
Estimation of center of gravity obtained from 3D whole body scanning anthropometry method (#24)
Noriko HAKAMADA, Kazuo FUNATO
Nippon Sport Science University, Tokyo, Japan



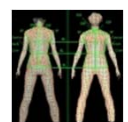
Deformation of raw 3D scan surfaces via multi-resolution RBF networks (#09)
Seung-Yeob BAEK^a, Ju-sung Lee^a, Kunwoo Lee^b
^a Human Centered CAD Laboratory, Seoul National University, Korea
^b School of Mechanical and Aerospace Engineering, Seoul National University, Korea




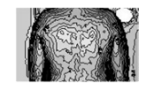







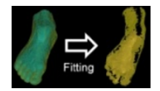
Development of tight-fitting clothing for sport (power) walking by using 3-dimensional data (#05)
Jae-Hoon JEONG, Jun Woo JO
Korea Research Institute for Fashion Industry, Dong-gu, Daegu, Korea



3D body scanning technology for virtual design of system "body-clothes" (#23)
V.E. KUZMICHEV, N.A. SAKHAROVA
Clothes Design Department, GOU VPO "Ivanovo State Textile Academy", Ivanovo, Russia



08:30-10:30 **Technical Session 4: Body Scanning Systems and Technologies** – Conference Room

- | | | |
|---|---|---|
|  | <p>Challenges of simple shape-from-shading in body surface measurement (#28)
 <i>Harvey MITCHELL</i>
 Civil, Surveying and Environmental Engineering, University of Newcastle, Australia</p> |  |
|  | <p>Human body measurement by digital photogrammetry system (#17)
 <i>Nobuo KOCHI, Kazuo KITAMURA, H. WATANABE, M. YAMADA</i>
 TOPCON Corp., Tokyo, Japan</p> |  |
|  | <p>Real-time 3D content creation of 3D human body using a handheld 3D imager and/or synchronized sensors platform (#33)
 <i>Shabtay NEGRY</i>
 Mantis Vision Ltd., Tel Aviv, Israel</p> |  |
|  | <p>3D body scanning by Artec 3D scanner (#14)
 <i>Tomohide IMADA</i>
 DataDesign, Nagoya, Japan</p> |  |
|  | <p>Shape completion and modeling of 3D foot shape while walking using homologous model fitting (#29)
 <i>Yuji YOSHIDA^a, Shunta SAITO^a, Yoshimitsu AOKI^a, Makiko KOUCHI^b, Masaaki MOCHIMARU^b</i>
 ^a Faculty of Science and Technology, Keio University, Tokyo, Japan
 ^b Digital Human Research Center, AIST, Tokyo, Japan</p> |  |

10:30-11:00 **Coffee Break**

11:00-12:30 **Technical Session 5: Body Scanning for Apparel II** – Conference Room

- | | | |
|---|--|---|
|  | <p>3D body scanning applications in apparel (#37)
 <i>Presenter/author not known yet</i>
 Shangai Yin Science and Technology Co.Ltd., China</p> |  |
|  | <p>Revolutionising the apparel industry in Thailand (#11)
 <i>Supiya CHAROENSIRIWATH</i>
 National Electronics and Computer Technology Center, Pathumthani, Thailand</p> |  |
|  | <p>3-D body measurements using active millimeter wave technology (#08)
 <i>M. F. KARIM, B. LUO, L. C. ONG, I. R. KHAN, and M. CASSIM</i>
 Institute for Infocomm Research (I2R), Singapore</p> |  |
|  | <p>New generation of the 3D body scanning technology SYMCAD™ (#36)
 <i>Jean-Loup RENNESSON</i>
 TELMAT Industrie SA, France</p> |  |

12:30-13:30 **Lunch Break**

14:00-15:30 **Technical Session 6: Digital Anthropometry and Ergonomics** – Conference Room

- | | | |
|---|---|---|
|  | <p>Body surface area and body volume measurements in the fields of health and sports sciences (#32)
 <i>Kazuo FUNATO^a, Noriko HAKAMADA^a, Hidehiko NAGASHIMA^b, Chiyoharu HORIGUCHI^b</i>
 ^a Laboratory for Human Movement Sciences, Nippon Sport Science University, Yokohama, Japan
 ^b Hamamatsu Photonics K.K., Japan</p> |  |
|  | <p>Implementation and analysis of the 2010 size Korea survey project (#31)
 <i>Chang Kyu PARK, Yongsoo PARK</i>
 i-Fashion Technology Center, Konkuk University, Seoul, Korea</p> |  |
|  | <p>Anthropometric study on chinese head (#04)
 <i>Roger BALL, Yan LUXIMON, Eric CHOW</i>
 Asian Ergonomic Lab, The Hong Kong Polytechnic University, Hong Kong</p> |  |
|  | <p>ANTHROSCAN - An integrated solution for planning, evaluation and dissemination of 3D scan surveys (#43)
 <i>Jochen BALZULAT, Rainer TRIEB</i>
 Human Solutions GmbH, Germany</p> |  |

15:30-16:00 **Coffee Break**

16:00-17:30 **Technical Session 7: Full Body Scanning – Conference Room**



Update on the deployment of 3dMD's modular body scanning system (#39)

Chris LANE

3dMD LLC., Atlanta (GA), USA



[TC]²'s full body scanning systems (#41)

Presenter/author not known yet

[TC]² Corp., Cary (NC), USA



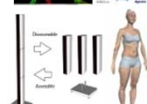
Web-based human body modeling by restricted number of anthropometric data (#27)

Hideto KAMESHIMA^a, Yuji NISHIO^a, Yukio SATO^b

^a Spacevision, Inc., Japan

^b Keio University, Tokyo, Japan

Keio University



VITUS 3D body scanner (#42)

Markus MAURER

VITRONIC GmbH, Wiesbaden, Germany



A protocol for evaluating the accuracy of 3D body scanners (#07)

Makiko KOUCHI, Masaaki MOCHIMARU, Bruce BRADTMILLER, Hein DAANEN,
Yunja NAM, Peng LEE, Beatriz NACHER

Digital Human Research Center, AIST, Tokyo, Japan

Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12	Table 13	Table 14	Table 15	Table 16	Table 17	Table 18	Table 19	Table 20	

17:30-18:30 **Closing Session with Discussion – Conference Room**



Closing speech and announcements for 3D Body 2011

Nicola D'APUZZO

Hometrica Consulting, Zurich/Ascona, Switzerland



Discussion on validation methods for 3D body scanners

Moredator: Masaaki MOCHIMARU

Digital Human Research Center, AIST, Tokyo, Japan

Exhibitors and sponsors (preliminary list)



3dMD (USA) – www.3dmd.com

3dMD is the world leader in 3D body scanning for medical applications, with well more than 800 3D cameras worldwide. The ultra-fast high-precision 3D surface imaging devices and the powerful software application software will be demonstrated at the conference exhibition.



Human Solutions (Germany) – www.human-solutions.com

Human Solutions is a world market leader for body scanning and ergonomics simulation. Systems from Human Solutions are used by more than 300 companies worldwide. At the workshop exhibition, Human Solutions will demonstrate full body scanning systems.



DataDesign (Japan) – www.datadesign.co.jp

DataDesign is a solutions provider specialized in 3D CAD/CAM, 3D scanning, 3D data processing and 3D printing. DataDesign is commercial partner of Artec Group Inc. (USA) and will demonstrate Artec's 3D scanning equipment at the workshop exhibition.



SpaceVision (Japan) – www.spacevision.com

SpaceVision is a leading manufacturer of innovative 3D imaging solutions used in various application fields. SpaceVision will demonstrate at the workshop exhibition the world's smallest, lightest and fastest 3D body scanner.



Shanghai Yin Science and Technology (China) – www.yingroup.com

Shanghai Yin Science and Technology is market leader in Asia for CAM/CAD/CAS systems. At the exhibition of the workshop, will be demonstrated the new 3D body scan system YIN HY-Scanner310 developed especially for the garment industry.



[TC]² (USA) – www.tc2.com

[TC]² is a world leader in 3D body scanning hardware and software. [TC]² provides 3D body scanning solutions in apparel, virtual fashion, health/fitness, medical, gaming, and online virtual worlds applications. [TC]²'s body scanning solutions will be presented at the exhibition.



TOPCON (Japan) – www.topcon.co.jp

TOPCON Corporation is a world leader in positioning equipment and eye care instruments. At the exhibition, TOPCON will demonstrate a 3D body scanning system based on photogrammetric techniques, with instant data acquisition and ability to acquire surface and texture.

Exhibitors and sponsors (preliminary list) cont.



Nihon Unisys (Japan) – www.unisys.co.jp , www.karada3d.net

Nihon Unisys will demonstrate at the exhibition the interactive solution 3D Body Smart Navigation which allows to visualize and simulate the personal 3D body figure, without the need of 3D body scanners, by providing three sizes, height, weight and age.



Pantomat (Hungary) – www.pantomat.com

Pantomat offers low cost 3D scanning systems based on passive stereo-photogrammetry. Mr. Lorant Szabo, CEO and founder of Pantomat, will held a presentation at the workshop.



VITRONIC (Germany) – www.vitronic.com

VITRONIC, a world leading organizations in the field of machine vision, is developer and manufacturer of body scanning systems employed by Human-Solutions. At the exhibition, VITRONIC will demonstrate its 3D full body scanner VITUS.

Program outline:

Asian Workshop on 3D Body Scanning Technologies, Tokyo, Japan, 19-20 April 2011					
Time	Tuesday 19 th April 2011		Wednesday 20 th April 2011		
08:00	Registration	Exhibition Setup	Registration Desk Setup	Exhibition Setup	
09:00	Opening Session HC – DHRC – 3DMD	Exhibition	Technical Session 4 Body Scanning Systems and Technologies	Exhibition	
10:00	Coffee Break		Coffee Break		
11:00	Technical Session 1 Body Scanning for Apparel I		Technical Session 5 Body Scanning for Apparel II		
12:00	Lunch Break		Lunch Break		
13:00	Technical Session 2 Body Scanning for Medicine and Health		Technical Session 6 Digital Anthropometry and Ergonomics		
14:00	Coffee Break		Coffee Break		
15:00	Technical Session 3 3D Body Modeling and Avatars		Technical Session 7 Full Body Scanning		Exhibition Breakdown
16:00	Poster Session		Closing Session with Discussion Validation of 3D Body Scanners		
17:00					
18:00					

Contact information:

Workshop venue: National Institute of Advanced Industrial Science and Technology (AIST) Waterfront 3F
Digital Human Research Center
2-3-26, Aomi, Koto-ku, Tokyo 135-0064, Japan



Workshop office: HOMETRICA CONSULTING - Dr. Nicola D'Apuzzo
Via Collegio 28, CH-6612 Ascona, Switzerland



Workshop website: www.3dbodyscanning.org/asia
Workshop e-mail: asia@3dbodyscanning.org