

3rd International Conference and Exhibition on **3D Body Scanning Technologies** Lugano, Switzerland, 16-17 October 2012

Organized by HOMETRICA CONSULTING - Dr. Nicola D'Apuzzo www.3dbodyscanning.org/2012

Program of the

3rd International Conference and Exhibition on 3D Body Scanning Technologies

Lugano, Switzerland, 16-17 October 2012

Organizer

Hometrica Consulting - Dr. Nicola D'Apuzzo Ascona/Zurich, Switzerland



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Program Outline

TimeTuesday 16th O08:00Registration09:0010:0010:00Opening Session	n	Exhibition Setup Exhibition		Technical Session 8 = Body Scanning Systems	Exhibition Setup
09:00 10:00		Setup	Technical Session 7 Body Scanning for	Technical Session 8 ¤ Body Scanning	
10:00	on * ¤	Exhibition	Body Scanning for	Body Scanning	
	on * ¤			Gysteins	Exhibition
		Coffee Break	e Break		
11:00			Technical Session 9 Medical Applications II	Technical Session 10 * Body Scanning for Apparel III	
Coffee Brea	ık			· · · · · · · · · · · · · · · · · · ·	
Medical			Lunch Break		
13:00					
14:00 Lunch Brea	Lunch Break		Technical Session 11 Scanning Methods & Technologies	Technical Session 12 * Anthropometric Studies & Surveys	
15:00					
Medical Scanning			Coffee Break		Exhibition
16:00 Systems	Scanning				Breakdown
Coffee Brea	ak		Technical Session 13 Kinect Body	Technical Session 14 Body Scanning for	
17:00 Technical Session 5 Tec	chnical Session 6		Scanning	Apparel IV	
Digital	Body Scanning for Apparel II		Closing	Session	
18:00					
Welcome	Welcome Cocktail				

* Sessions with invited speakers and/or keynote presentations

¤ Sessions with world/international premieres

Conference Office



HOMETRICA CONSULTING - Dr. Nicola D'Apuzzo Via Collegio 28, CH-6612 Ascona, Switzerland www.hometrica.ch info@hometrica.ch Conference website: www.3dbodyscanning.org Conference email: info@3dbodyscanning.org Conference phone: +41.91.791.5524

CONFERENCE PROGRAM

3	rd International Conference and Exhibition on 3D Body Scanning Technologies ugano, Switzerland, 16-17 October 2012
	OGUNO, SWITZENUNU, 16-17 OCTOBET 2012 OMETRICA CONSULTING - Dr. Nicola D'Apuzzo www.3dbodyscanning.org/2012
Tuesday 16th	October 2012
08:00-09:30	Registration – Welcome Desk
09:30-11:30	Opening Session – Room B1 Session Chair: Dr. N. D'Apuzzo Hometrica Consulting (Switzerland)
Thometrica	Welcome speech from the conference director N. D'Apuzzo Hometrica Consulting, Switzerland
3dMD¥	From Scans to Avatars: Using Multi-Viewpoint, High Precision world premiere 3D Surface Imaging to Create Realistic Deformable Models of the Body C. Lane ¹ , M.J. Black ² '3dMD LLC, Atlanta (GA), USA, ² Max Planck Institute for Intelligent Systems, Tübingen, Germany #45
Fashion	Digital Convergence in IT and Fashion: i-Fashion <u>Invited speaker</u> : C.K. Park Konkuk University, Seoul, S. Korea #23
2 bespoke	Using the Body to Design for the Body Invited speaker: S. Summit Bespoke Innovations Inc., San Francisco (CA), USA #57
11:30-12:00	Coffee Break – Foyer
12:00-13:30	Technical Session 1: Medical Applications I – Room C Session Chair: Dr. M. Jezersek University of Ljubljana (Slovenia)
Understein Source in Source in	Computer Assisted Optimization of Prosthetic Socket Design for the Lower Limb Amputees Using 3-D Scan <i>F. v Waldenfels</i> ¹ , <i>S. Raith</i> ¹ , <i>M. Eder</i> ¹ , <i>A. Volf</i> ¹ , <i>J. Jalal</i> ² , <i>L. Kovacs</i> ¹ ¹ CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany ² Institute of Medical Engineering at the Technische Universität München, Garching, Germany #52
BRISTOL NHS	3D In-Vivo Measurement of Skin Topography Using Photometric Stereo A. Sohaib ¹ , A. Farooq ¹ , L. Smith ¹ , M. Smith ¹ , R. Warr ² ¹ University of the West of England, Bristol, UK, ² North Bristol NHS Trust, UK #50
BRISTOL	3D Skin Texture Analysis: A Neural Network and Photometric Stereo Perspective S. Anwar, L. Smith, M.Smith University of the West of England, Bristol, UK #56
QC Restories	Voxel Modeling Versus Nurbs and Mesh Modeling in Medical Applications A. Köster Antonius Köster GmbH & Co. KG., Meschede, Germany #66
12:00-13:30	Technical Session 2: Body Scanning for Apparel I – Room B1 Session Chair: Dr. D. Bruner Size Stream (USA)
	Investigation into the Fit and the Distribution of Air Gaps of the Protective Jackets to Female Body Form N. Nawaz, O. Troynikov, K. Kennedy RMIT University, Melbourne, Australia #02
	Use of 3D Body Scanning Technique for Heat and Mass Transfer Modelling in Clothing A. Psikuta ¹ , J. Frackiewicz-Kaczmarek ^{1,2} , R.M. Rossi ¹ ¹ Empa, St. Gallen, Switzerland, ² University of Haute Alsace, Mulhouse, France #19
IOWA STATE UNIVERSITY	3D Body Scanning for Examining Active Body Positions: A Pilot Study of Re-Designing Scrubs F. Baytar, J. Aultman, J. Han Iowa State University, Ames (IA), USA #18
Hochschule Niederrhein Unwerde if Replied Edwards	Investigation on Body Shaping Garments Using 3D-Body Scanning Technology and 3D-Simulation Tools M. Ernst, U. Detering-Koll, D. Güntzel Niederrhein University of Applied Sciences, Mönchengladbach, Germany #37
13:30-15:00	Lunch Brook

15:00-16:30	Technical Session 3: Medical Scanning Systems – Room C	Session Chair: Prof. M. Markey The University of Texas at Austin (USA)
	Handheld 3D Measuring System Based on DSLR Camera U. Pavlovcic, M. Jezersek , J. Mozina University of Ljubljana, Slovenia #40	
Amway	Device and Method for Precise Repositioning of Subjects for 3D Imaging of R.C. Roth, M. DePauw, A. Hepner Amway Corp., Ada (MI), USA #09	of Head, Face, and Neck
BRISTOL BRISTOL	Novel Photometric Stereo Based Pulmonary Function Testing J. Ahmad ¹ , J. Sun ¹ , L. Smith ¹ , M. Smith ¹ , J. Henderson ² , A. Majumdar ³ ¹ University of the West of England, Bristol, UK, ² Bristol University, UK, ³ Frenchay F	lospital, Bristol, UK #29
Tech/Med 3D	How to Make 3D Scanning Easy, Fast and Reliable M. Babin TechMed 3D, St-Nicolas (QC), Canada #61	
15:00-16:30	Technical Session 4: Full Body Scanning – Room B1	Session Chair: J.M. Surville Lectra (France)
ŗ	An Overview of 3D Body Scanning History – And a Look Forward D. Bruner Size Stream, Cary (NC), USA #48	world premiere
	VITUS 3D Body Scanner M. Maurer Vitronic GmbH, Wiesbaden, Germany #25	
UNIVERSITY OF TRENTO - Italy	Low-Cost Garment-Based 3D Body Scanner N. Biasi, F. Setti, M. Tavernini, A. Fornaser, M. Lunardelli, M. Da Lio, M. De Cecco University of Trento, Italy #35	
16:30-17:00	Coffee Break - Foyer	
		Session Chair: Dr. B. Bradtmiller
17:00-18:30	Technical Session 5: Digital Anthropometry – Room C	Anthrotech (USA)
6	Robust Automatic Labelling of Anatomical Landmarks on 3D Body Scans A. Giachetti, C. Lovato, U. Castellani, C. Zancanaro University of Verona, Italy #07	
THE UNIVERSITY OF TEXASTORS AT ADDITION THE OWNER OF THE OWNER THE OWNER OWNER THE OWNER OWNER THE OWNER	Three-Dimensional Analysis of Facial Asymmetry of Healthy Hispanic Chil J. Lee ^{1,2} , B. Ku ¹ , A.C. Da Silveira ^{1,3} , M. K. Markey ^{1,2} ¹ The University of Texas at Austin, USA, ² The University of Texas MD Anderson C ³ Dell children's Craniofacial & Reconstructive Plastic Surgery, Austin (TX), USA #1	ancer Center, Houston (TX), USA,
University of South Australia	Which Waist Girth? An Analysis Using 3D Scanning N. Daniell, T. Olds, G. Tomkinson University of South Australia, Australia #51	
3dMD♥	Collecting Large Scale Anthropometric Samples Around the World C. Lane 3dMD LLC, Atlanta (GA), USA #44	
17:00-18:30	Technical Session 6: Body Scanning for Apparel II – Room B1	Session Chair: Dr. S.H. Lin University of Hawaii at Manoa (USA)
	The Power of Aggregate Data; Gaining Insights and a Competitive Advant	age
by Unique Solutions	R. Kutnick, J. Gould-Thorpe Me-Ality, Unique Solutions Ltd, Dartmouth (NS), Canada #62	

	17 th October 2012
08:00-08:50	Registration – Welcome Desk
08:50-10:00	Technical Session 7: Body Scanning for Heath & Sport – Room C Session Chair: Dr. A. Psiku EMPA (Switzerlar
IOWA STATE UNIVERSITY	3D Virtual Images as a Motivational Tool for an Individual's Exercise and Diet YA. Lee Iowa State University, Ames (IA), USA #04
University of South Australia	Volumetric Differences in Body Shape Among Adults with Different Body Mass Index Values: An Analysis Using 3D Body Scans N. Daniell, T. Olds, G. Tomkinson University of South Australia, Mawson Lakes (SA), Australia #43
Sheffield Hallam University	Calculating Body Segment Inertia Parameters from a Single Rapid Scan Using the Microsoft Kinect S. Clarkson, S. Choppin, J. Hart, B. Heller, J. Wheat Sheffield Hallam University, UK #31
08:50-10:00	Technical Session 8: Body Scanning Systems – Room B1 Session Chair: Prof. A. Giache University of Verona (Ita
TELMAT	A Full-Range of 3D Body Scanning Solutions JL. Rennesson TELMAT Industrie SA, Soultz, France #49
Stade USION	New Portable 3D Body Scanner - Cartesia BS03world premierM. HayashiSpacevision Inc., Tokyo, Japan #55
3dMD 💱	The Breakthrough Potential for Dynamic High-Frame Rate 3D Dense Surface Capture C. Lane 3dMD LLC., Atlanta (GA), USA #46
10:00-10:30	Coffee Break – Foyer
10:30-12:00	Technical Session 9: Medical Applications II – Room C Session Chair: C. La 3dMD (US) 3dMD (US)
THE UNIVERSITY OF TEXAS S AT AUSTIN MDAnderson Cancer Center	Breast Curvature of the Upper and Lower Breast Mound: 3D Analysis of Patients who Underwent Breast Reconstruction <i>J. Lee</i> ^{1,2} , <i>G.P. Reece</i> ² , <i>M.K. Markey</i> ^{1,2} ¹ The University of Texas at Austin, Austin (TX), USA, ² The University of Texas MD Anderson Cancer Center, Houston (TX), USA #14
HOUSTON HOUSTON THE UNIVERSITY OF TAXASTIN MID Anderson Cancer Center	Semi-Automated Registration of 3D Torso Images from Breast Reconstruction Surgery L. Zhao ¹ , S.K. Shah ¹ , G.P. Reece ² , M.A. Crosby ² , E.K. Beahm ² , M.C. Fingeret ² , M.K. Markey ^{2,3} , F.A. Merchant ¹ ¹ University of Houston, USA, ² The University of Texas MD Anderson Cancer Center, Houston (TX), USA, ³ The University of Texas at Austin, USA #15
S A P S A P	Breast Reconstruction Using Patients Own Tissue Based on CT Angiography and 3-D Surface Scanning J. Jalali ¹ , M. Eder ² , S. Raith ² , A. Volf ² , F. v Waldenfels ² , L. Kovacs ² ¹ Institute of Medical Engineering at the Technische Universität München, Garching, Germany
SURGERY	² CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany #53
And	
C AP S S C A	² CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany #53 Finite Element Simulation of the Deformation of the Female Breast Based on MRI Data and 3-D Surface Scanning: An In-Vivo Method to Assess Biomechanical Material Parameter Sets S. Raith ¹ , M. Eder ¹ , F. v Waldenfels ¹ , J. Jalali ² , A. Volf ¹ , L. Kovacs ¹ ¹ Research Group CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany
анномож ин	 ²CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany #53 Finite Element Simulation of the Deformation of the Female Breast Based on MRI Data and 3-D Surface Scanning: An In-Vivo Method to Assess Biomechanical Material Parameter Sets S. Raith¹, M. Eder¹, F. v Waldenfels¹, J. Jalal², A. Volf¹, L. Kovacs¹ ¹Research Group CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany ²Institute of Medical Engineering at the Technische Universität München, Garching, Germany #54 Technical Session 10: Body Scanning for Apparel III – Boom B1
	 ²CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany #53 Finite Element Simulation of the Deformation of the Female Breast Based on MRI Data and 3-D Surface Scanning: An In-Vivo Method to Assess Biomechanical Material Parameter Sets S. Raith¹, M. Eder¹, F. v Waldenfels¹, J. Jalal², A. Volf¹, L. Kovacs¹ ¹Research Group CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany ²Institute of Medical Engineering at the Technische Universität München, Garching, Germany #54 Technical Session 10: Body Scanning for Apparel III – Room B1 Session Chair: Dr. O. Troyniko <i>RMIT University (Australiti</i> Keynote: The Return of Craft Designer (Pattern Maker) Re-Valued Through the New 3D Technologies JM. Surville
	 ²CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany #53 Finite Element Simulation of the Deformation of the Female Breast Based on MRI Data and 3-D Surface Scanning: An In-Vivo Method to Assess Biomechanical Material Parameter Sets <i>S. Raith¹</i>, <i>M. Eder¹</i>, <i>F. v Waldenfels¹</i>, <i>J. Jalal²</i>, <i>A. Volf¹</i>, <i>L. Kovacs¹</i> ¹Research Group CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany ²Institute of Medical Engineering at the Technische Universität München, Garching, Germany #54 Technical Session 10: Body Scanning for Apparel III – Room B1 Session Chair: Dr. O. Troyniko <i>RMIT University (Australit</i>) <u>Keynote</u>: The Return of Craft Designer (Pattern Maker) Re-Valued Through the New 3D Technologies <i>JM. Surville</i> <i>Lectra, Cestas, France #58</i> Fit Visualization and Simulation on Individual 3D Scanatars <i>U. Botzenhardt</i>
	 ²CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany #53 Finite Element Simulation of the Deformation of the Female Breast Based on MRI Data and 3-D Surface Scanning: An In-Vivo Method to Assess Biomechanical Material Parameter Sets <i>S. Raith</i>¹, <i>M. Eder</i>¹, <i>F. v Waldenfels</i>¹, <i>J. Jalal</i>², <i>A. Volf</i>¹, <i>L. Kovacs</i>¹ ¹Research Group CAPS (Computer Aided Plastic Surgery), Technische Universität München, Munich, Germany ²Institute of Medical Engineering at the Technische Universität München, Garching, Germany #54 Technical Session 10: Body Scanning for Apparel III – Room B1 Session Chair: Dr. O. Troyniko <i>RMIT University (Australit</i> <i>JM. Surville</i> <i>Lectra, Cestas, France #58</i> Fit Visualization and Simulation on Individual 3D Scanatars <i>U. Botzenhardt</i> <i>Human Solutions GmbH, Keiserslautern, Germany #59</i> 3D Digital Technology from Concept to Consumer <i>R. Sareen</i>^{1,2}

13:30-15:30	Technical Session 11: Scanning Methods & Technologies – Room C Session Chair: Dr. Y.A. Lee lowa State University (USA)
	Simple Shape-from-Shading for Human Surface Measurement Harvey Mitchell University of Newcastle, Australia #10
	Laser Based Real-Time Measurement of Thorax 3D Deformation with Motion Compensation K. Povšič, J. Možina, M. Jezeršek University of Ljubljana, Slovenia #34
Retired Physical Laboratory	Improving the Quality of Measurements through the Implementation of Customised Standards A. Robinson ¹ , M. McCarthy ¹ , L. Zou ² , S. Brown ¹ , A. Evenden ¹ ¹ National Physical Laboratory, Teddington, UK, ² Barts and The London School of Medicine and Dentistry, Queen Mary University of London, UK #13
University of Kent	A Single-Shot and Real-Time 3D Imaging Technique for Facial Motion Capture Based on Triple-Frequency Color Fringe Projection <i>X. Zhou</i> ^{1,2} , <i>T. Yang</i> ¹ , <i>H. Zhao</i> ¹ , <i>A.G. Podoleanu</i> ² ¹ <i>Xi</i> 'an Jiaotong University, Xi'an, Shaanxi, China, ² University of Kent, Canterbury, UK #17
4D View Solutions	Synchonized Multi-Camera 4D Video Capture Solutions Providing Photorealistic Video Data in Four Dimensions <i>R. Broadbridge</i> 4D View Solutions, Grenoble, France #68
13:30-15:30	Technical Session 12: Anthropometric Studies & Surveys – Room B1 Session Chair: Dr. Charoensiriwath NECTEC (Thailand)
	Iplementation and Analysis of Size Korea Projects using 3D Body Scanning Systems <u>Invited Speaker</u> : C.K. Park Konkuk University, Seoul, S. Korea #22
HUMAN Solutions ASSYST	SizeITALY - The Actual Italian Measurement Survey P.V. Stampfli ¹ , A. Rissiek ² , R. Trieb ² , A. Seidl ² ¹ Sistemi Assyst s.r.l., Lainate (MI), Italy, ² Human Solutions GmbH, Keiserslautern, Germany #60
• RMIT	Australian Apparel Anthropometric 3D Database (AAA3D): A Collaborative Approach K. Kennedy ¹ , J. Kellock ² , O. Troynikov ¹ ¹ RMIT University, Melbourne, Australia, ² Council of Textiles and Fashion Industries of Australia #03
essearch	Comparison of Female Shape Analysis Methods for the Development of a New Sizing System J. Webster, J. Cornolo, Y. Kelkel Oxylane Research, Villeneuve-d'Ascq, France #08
HOHENSTEIN•	3D Hand Measuring with a Mobile Scanning System A. Klepser ¹ , M. Babin ² , C. Loercher ² , E. Kirchdoerfer ¹ , J. Beringer ¹ , A. Schmidt ¹ ¹ Hohenstein Institut fuer Textilinnovation gGmbH, Boennigheim, Germany, ² TechMed 3D, St-Nicolas (QC), Canada #39
15 00 10 00	
15:30-16:00	Coffee Break – Foyer
15:30-16:00 16:00-17:30	Coffee Break – Foyer Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell University of S. Australia (Australia)
	Technical Session 13: Kinect Body Scanning – Boom C. Session Chair: Dr. N. Daniell
16:00-17:30	Technical Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell 3D Scanning with Multiple Depth Sensors J. Kilner A. Neophytou A. Hilton
16:00-17:30 SURREY Wayne State UNIVERSITY	Technical Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell University of S. Australia (Australia) 3D Scanning with Multiple Depth Sensors J. Kilner A. Neophytou A. Hilton University of Surrey, Guildford, UK #41 Exploratory Analysis of College Student's Satisfaction of Body Scanning with Kinect S.H. Lin ¹ , R. Johnson ² , D. Stricker ³ , Y. Cui ³ ¹ University of Hawaii at Manoa, Honolulu (HI), USA, ² Wayne State University, Detroit (MI), USA,
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16:00-17:30 SURVESTY OF SURVESTY OF SURVESTY OF UNVESTY OF UNVESTY UN	Technical Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell University of S. Australia (Australia) 3D Scanning with Multiple Depth Sensors J. Kilner A. Neophytou A. Hilton University of Surrey, Guildford, UK #41 Exploratory Analysis of College Student's Satisfaction of Body Scanning with Kinect S.H. Lin ¹ , R. Johnson ² , D. Stricker ³ , Y. Cu ³ ¹ University of Hawaii at Manoa, Honolulu (HI), USA, ² Wayne State University, Detroit (MI), USA, ³ DFKI - Kaiserslautern University, Germany #05 Calibration-less Anthropometric Scanner Using GPU's M. Gazziro, P. Scotton, H. Bittencourt, A. Osti Universidade de São Paulo, Brazil #16 Microsoft Kinect for THz Sensor Management P. Engström, M. Axelsson, M. Karlsson Swedish Defence Research Agency (FOI), Linköping, Sweden #38
16:00-17:30 SURREST OF SURREST WYNESTATE UNIVERSITY OF WYNESTATE WYNESTA WYN	Technical Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell University of S. Australia (Australia) 3D Scanning with Multiple Depth Sensors J. Kilner A. Neophytou A. Hilton University of Surrey, Guildford, UK #41 Exploratory Analysis of College Student's Satisfaction of Body Scanning with Kinect S.H. Lin ¹ , R. Johnson ² , D. Stricker ³ , Y. Cu ³ 'University of Hawaii at Manoa, Honolulu (HI), USA, ² Wayne State University, Detroit (MI), USA, ³ DFKI - Kaiserslautern University, Germany #05 Calibration-less Anthropometric Scanner Using GPU's M. Gazziro, P. Scotton, H. Bittencourt, A. Osti Universidade de São Paulo, Brazil #16 Microsoft Kinect for THz Sensor Management P. Engström, M. Axelsson, M. Karlsson Swedish Defence Research Agency (FOI), Linköping, Sweden #38
16:00-17:30 SURVERTY OF SURVERTY OF SURVERTY OF WAYNE STATE UNIVERSITY WAYNE STATE UNIVERSITY OF UNIVERSITY OF UNIVER	Technical Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell University of S. Australia (Australia) 3D Scanning with Multiple Depth Sensors J. Kilner A. Neophytou A. Hilton University of Surrey, Guildford, UK #41 Image: Comparison of Section (Comparison (
16:00-17:30 ★ SURREY WINESTOP WINESTOP WINESTOP	Technical Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell University of S. Australia (Australia) 3D Scanning with Multiple Depth Sensors J. Kilner A. Neophytou A. Hilton University of Surrey, Guildford, UK #41 Exploratory Analysis of College Student's Satisfaction of Body Scanning with Kinect S.H. Lin ¹ , R. Johnson ² , D. Stricker ³ , Y. Cu ³ 'University of Hawaii at Manoa, Honolulu (HI), USA, ² Wayne State University, Detroit (MI), USA, ³ DFKI - Kaiserslautern University, Germany #05 Session Chair: Prof. M. Sittencourt, A. Osti Universidade de São Paulo, Brazil #16 Microsoft Kinect for THz Sensor Management P. Engström, M. Axelsson, M. Karlsson Swedish Defence Research Agency (FOI), Linköping, Sweden #38 Session Chair: Prof. M. Ernst Niederrhein University (Germany) Revolutionising the Garment Industry in Thailand S. Charoensiriwath National Electronics and Computer Technology Center, Pathumthani, Thailand #47 Session Chair: Prof. M. Ernst Niederrhein University (Germany) The Body-ScanFIT System: The Importance of Population's Classification into Morphological Families and of Anthropometric Mannequins in Apparel and Ergonomics G. Sereni, L. Franceschi Sestin L. Franceschi
16:00-17:30 ★ SURREY WINESTOP WINESTOP WINESTOP	Technical Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell 3D Scanning with Multiple Depth Sensors J. Kiner A. Neophytou A. Hilton University of Surrey, Guildford, UK #41 Exploratory Analysis of College Student's Satisfaction of Body Scanning with Kinect S.H. Lin', R. Johnson ² , D. Stricker ³ , Y. Cu ³ 'University of Hawaii at Manoa, Honolulu (HI), USA, ?Wayne State University, Detroit (MI), USA, ³ DFK1 - Kaiserslautern University, Germany #05 Calibration-less Anthropometric Scanner Using GPU's M. Gazziro, P. Scotton, H. Bittencourt, A. Osti University of Lawaii at Manoa, Honolulu (HI), Linköping, Sweden #38 Session Chair: Prof. M. Ernst Nieder/hein University, Germany Microsoft Kinect for THz Sensor Management P. Engström, M. Axelsson, M. Karlsson Session Chair: Prof. M. Ernst Nieder/hein University (Germany) Revolutionising the Garment Industry in Thailand S. Charoensriwath National Electronics and Computer Technology Center, Pathumthani, Thailand #47 The Body-ScanFIT System: The Importance of Population's Classification into Morphological Families and of Anthropometric Mannequins in Apparel and Ergonomics G. Sereni, L. Franceschi CAD Modelling Ergnomics SI, Florence, Italy #64 Identification of Textile Materials Properties in "Body-Clothes" Scanned Systems Lis. Zvereva', V.E. Kuzmichev', D.C. Adolphe ² , L. Schacher ⁴ Schacher ⁴
16:00-17:30 ★ SURREY WINESTOP WINESTOP WINESTOP	Technical Session 13: Kinect Body Scanning – Room C Session Chair: Dr. N. Daniell University of S. Australia (Australia) 3D Scanning with Multiple Depth Sensors J. Kilner A. Neophytou A. Hilton University of Surrey, Guildford, UK #41 Exploratory Analysis of College Student's Satisfaction of Body Scanning with Kinect S.H. Lin', R. Johnson ² , D. Stricker ³ , Y. Cu ² Vuiversity of Hawaii at Manoa, Honolulu (HI), USA, ² Wayne State University, Detroit (MI), USA, ³ DFKI - Kaiserslauten University, Germany #05 Calibration-less Anthropometric Scanner Using GPU's M. Gazziro, P. Scotton, H. Bittencourt, A. Osti University de de São Paulo, Brazil #16 Session Chair: Prof. M. Ernst Niedershead es São Paulo, Brazil #16 Microsoft Kinect for THz Sensor Management P. Engström, M. Axelsson, M. Karlsson Swedish Defence Research Agency (FOI), Linköping, Sweden #38 Session Chair: Prof. M. Ernst Niedernhein University (Germany) Revolutionising the Garment Industry in Thailand S. Charoensriwath National Electronics and Computer Technology Center, Pathumthani, Thailand #47 The Body-ScanFIT System: The Importance of Population's Classification into Morphological Families and of Anthropometric Mannequins in Apparel and Ergonomics G. Sereni, L. Franceschi CAD Modelling Ergnomics Srl, Florence, Italy #64 Identification of Textile Materials Properties in "Body-Clothes" Scanned Systems IS. Zvereva', V.E. K. Kuzmichev', D.C. Adolphe ⁶ , L. Schache ^a 'Ivanovo State Textile Academy, Ivanovo, Russia, ² University of Haute Alsace, Mulhouse, France #27 A Commercial System for the Practical Generation of 3D Imaging and Measurement from 2D Camera Hardware

Opening Session

Tuesday, 09:30-11:30, Room B1

From Scans to Avatars: Using Multi-Viewpoint, High Precision 3D Surface Imaging to Create Realistic Deformable Models of the Body

Chris LANE - 3dMD LCC, Atlanta (GA), USA

Prof. Dr. Michael J. BLACK - Max Planck Institute for Intelligent Systems, Tübingen, Germany

Chris Lane is chairman and CEO of 3dMD, the world leader in 3D body scanning for medical applications. Prof. Dr. Michael J. Black is director of the Perceiving Systems Department at the Max Planck Institute for Intelligent Systems (Germany) and adjunct Professor at the Department of Computer Science of Brown University (USA). Mr. Lane and Prof. Black will jointly held the first technical presentation of the conference.

At the first Lugano Conference in 2010 Michael Black outlined his vision to Chris Lane for the development of a personalized avatar of complex human body movements calibrated by a streamlined workflow of 3D body scans. During the conference 3dMD publically launched its new generation of very fast 3D body surface capture devices which Michael felt could be developed to support his long term software research. At the second conference a video of the pre-delivery 3Dbody system developed for Michael's group was shown. Less than one year after commissioning the equipment, Chris and Michael will be showing a fully functional hardware and software process which results in the production of a spatially precise dynamic avatar which can be subsequently edited and posed. The process of going from a "scan" to an "avatar" is fully automatic, does not require landmarking, and the resulting avatar is easily edited to change its shape and pose. The joint presentation will highlight the development of a very focused commercial-academic partnership and debut the resultant technology with videos and demonstrations that have not been seen before at a public event. The presenters will conclude by summarizing the commercial potential for this approach to dynamic 3D body metrics.

Digital Convergence in IT and Fashion: i-Fashion

Invited speaker Prof. Dr. Chang Kyu PARK - Konkuk University, Seoul, S. Korea

Prof. Dr. Chang Kyu Park is director of i-Fashion Technology Center and associate professor at Konkuk University, Seoul, South Korea. His first speech at the opening session will present and discuss the achievements of the i-Fashion project.

The i-Fashion Technology Center in Korea operates one of the world's most advanced set-ups of virtual reality. Using virtual models based on an 3D body scan, consumers get personalized recommendations of products they may like. At the same time, vendors' efficiency increases due to the virtual, and not physical, representation of products for most stages of the value chain.

Using the Body to Design for the Body

Invited speaker Scott SUMMITT - Bespoke Innovations Inc., San Francisco (CA), USA

Scott Summit founded Bespoke Innovations in 2010 based on 20 years of experience and research in design and additive fabrication.

The speech of Mr. Summit will regard the creation of customized 3D printed legs for amputees. The personalized design of the prosthetics is based on 3D scan data of the customer.

Keynote Presentation – Body Scanning for Apparel III

The Return of Craft Designer (Pattern Maker) Re-Valued Through the New 3D Technologies Jean-Marc SURVILLE - Lectra, Cestas, France

Jean-Marc Surville is an industrial engineer at Lectra (France). He has a very large practical experience in the treatment, processing and use of 3D body scan data for applications related to apparel and anthropometry.

His keynote speech at the conference will focus on the positive contribution of new 3D technologies for the creative work in the world of fashion and apparel.

Invited Speaker – Anthropometric Studies & Surveys

Implementation and Analysis of Size Korea Projects Using 3D Body Scanning Systems Invited speaker Prof. Dr. Chang Kyu PARK - Konkuk University, Seoul, S. Korea

The second speech of Prof. Dr. Chang Kyu Park will focus on the results obtained by the large scale measurement campaign Size Korea.











Technical Session 10, Wednesday, 10:30, Room B1

Technical Session 12, Wednesday, 13:30, Room B1





Size Korea

Conference Exhibition

Tuesday 9:00 - Wednesday 15:00, Room B2/3

In the parallel exhibition, various manufacturers of equipment will demonstrate live their 3D body scanning systems and software solutions.

Different scanning technologies are represented: laser scanning, white light scanning, passive photogrammetry, etc.

Different systems will be shown: full body scanners, foot scanners, modular scanning systems, hand-held scanners and software solutions.

The attendees will have to possibility to test live the systems and to meet and discuss directly with the manufacturers and resellers.

World & International Premieres

3dMD (USA) – Max Plank Institute (Germany)

Chris Lane, chairman and CEO of 3dMD, and Prof. Dr. Michael J. Black, director at the Max Planck Institute for Intelligent Systems (Germany), will jointly held the first technical presentation of the conference. The joint presentation will highlight the development of a very focused commercialacademic partnership and debut the resultant technology with videos and demonstrations that have not been seen before at a public event.

Opening Session

Exhibition

Exhibition

Technical Session 4

Exhibition and Technical Session 8

TechMed 3D (Canada) – Creaform (Canada)

TechMed 3D will have the privilege of introducing the world premiere of the fast, easy and reliable new scanner from Creaform, the GO! SCAN 3D. TechMed 3D have optimized its software MSoft with the scanner integrating the most user-friendly solution for digitization of the human body on the market. Live demonstrations at the technical exhibition.

SpaceVision (Japan)

SpaceVision will demonstrate at the exhibition the very new version of its portable, compact, light, fast 3D full body scanner. The technical details will be presented during Technical Session 8.

Elinvisin (Lithouania) – UCS (Slovenia)

Elinvision and UCS will demonstrate at the exhibition the new jointly developed 3D foot scanner for best fit shoe selection.

Size Stream (USA)

Dr. David Bruner, Vice President of the newly launched company Size Stream will held a presentation at Technical Session 4. Discarding old technology from the past, Size Stream is developing a new generation of body scanner, complete from scratch.

Welcome Cocktail

A welcome cocktail with local gastronomy products and wine of the region is offered to all participants at the evening of the first day of the conference. The welcome cocktail is kindly offered by the organizer Hometrica Consulting.



SUPPORTERS

Repubblica e Cantone Ticino (Switzerland) - www.ti.ch/sviluppo-economico

The Finance and Economics Department of Canton Ticino is supporting the conference. Representatives of the economic promotion office will be present at the conference to illustrate the opportunities offered by the region for new business initiatives.

Lugano Turismo (Switzerland) – www.luganoturismo.ch

The tourist organization of Lugano is supporting the conference. The tourist office provides any tourist information regarding Lugano and surrounding areas.

Amiconi Consulting (Switzerland) - www.amiconiconsulting.ch

Amiconi Consulting is supporting the conference. The service company will take care of the hotel reservations for attendees of the conference and provide on request private transportation from and to Milan airports.



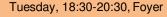




















LIST OF EXHIBITORS

3dMD (USA) – www.3dmd.com

3dMD is the world leader in 3D body scanning for medical applications, with well more than 1,400 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.

TechMed 3D (Canada) - www.techmed3d.com

TechMed 3D is an high tech company specializing in body measurement technologies and digital imaging solutions adapted to the orthotics, prosthetics and custom equipment market. 3D imaging devices and application software will be demonstrated at the conference exhibition.

4D View Solutions (France) – www.4dviews.com

4D View Solutions provides complete hardware and software platforms for the capture of photorealistic videos in 3D. The systems enable to film a dynamic scene and output a photorealistic 3D video of the filmed subject for real-time or offline analysis and applications.

SpaceVision (Japan) – www.space-vision.jp

SpaceVision is a leading manufacturer of innovative 3D imaging solutions used in various application fields. At the exhibition of the conference, SpaceVision will demonstrate its portable, small, light, fast 3D full body scanner.

VITRONIC (Germany) – www.vitronic.com

VITRONIC, a world leading organization 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.

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. Human Solutions will jointly participate at the exhibition with VITRONIC.

TELMAT Industrie (France) – www.symcad.com

TELMAT is a world leader in 3D body scanning and automated body measurement. The highspeed 3D digitization process SYMCAD has enabled to scan and measure more than 800'000 individuals nowadays. TELMAT will present at the exhibition its 3D body scanning solutions.

Lectra (France) - www.lectra.com

Lectra is the world leader in integrated technology solutions for industries using textiles to manufacture their products. Lectra will demonstrate Modaris, the apparel pattern-making and grading software solution with fully-integrated 3D virtual prototyping technology.

ELINVISION (Lithuania) – www.elinvision.com

ELINVISION designs and produces measuring and control devices, machine vision systems, 3D laser scanners, digital dental cameras and software. At the conference exhibition, ELINVISION will demonstrate its 3D foot scanning solutions..

UCS (Slovenia) - www.ucstech.eu

UCS d.o.o. (Slovenia) has been established to offer footwear manufacturing and retail companies sophisticated solutions for providing the best fitting footwear to their customers. At conference exhibition, will be presented jointly with ELINVISION the new best fit shoe selection scanner.

corpus.e (Germany) - www.corpus-e.com

corpus.e designs 3D imaging and 3D scanning systems. At the conference exhibition, corpus.e will demonstrate its 3D foot scanning and measurement system lightbeam, based on the patented MagicalSkin technology.

Right Shoes - UTD SA (Switzerland) - www.rightshoes.ch

UTD - Unique Trend Developments has developed Right Shoes, an online assistant that can suggest the right size to choose during shoes on-line shopping on websites of footwear brands, manufacturers and e-commerces. Right Shoes will be demonstrated at the conference exhibition.

Poikos (UK) - www.poikos.com

Poikos has developed the core technology of FlixFit: a body measurement solution for e-commerce which uses ordinary webcams, tablets and smartphones. This enables a quick and simple way for users to find out their size, and make more informed choices about the clothes that they buy.

Tukatech - Styku (USA) - www.tukatech.com, www.styku.com

Tukatech provides pattern making, grading and marker making software, 3D apparel prototyping systems and manufacturing equipment. It also has created Styku, the webs only virtual fitting room that truly simulates fit in 3D, developed for on-line apparel sales.

CAD Modelling Ergonomics (Italy) - www.cadmodelling.it

CAD Modelling Ergonomics produces tailor dummies, fit mannequins and anthropometric fashion dummies for fitting control and the portable 3D full body scanning system Body-ScanFit.





















corpus.e

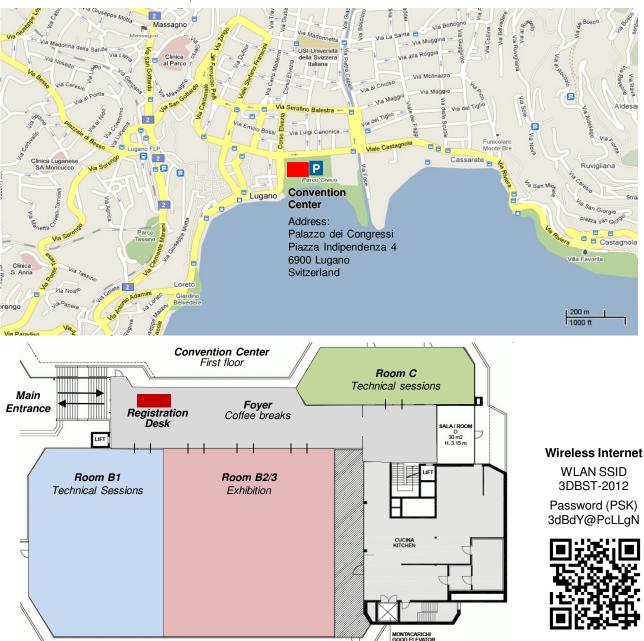








CONVENTION CENTER LUGANO



The conference and exhibition take place at the 1st floor of the Convention Center

Lunch Breaks

Restaurants, cafes and bars in the surroundings of the convention center.



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4th International Conference and Exhibition on **3D Body Scanning Technologies** Orange County (CA), USA, 19-21 November 2013

Organized by HOMETRICA CONSULTING - Dr. Nicola D'Apuzzo

www.3dbodyscanning.org



3DBST 2013

4th International Conference and Exhibition on **3D BODY SCANNING TECHNOLOGIES** Orange County (CA), USA, 19-21 Nov. 2013

Dates:

19-21 November 2013

Venue:

Orange County, California, USA

Organizer:

Hometrica Consulting, Switzerland

Website: www.3dbodyscanning.org

Conference facts:

- · Main and largest international event focused on 3D body scanning technologies
- · Technical/scientific committee formed by international experts of various sectors
- · Two and half days, 16 technical sessions with expected 60-80 presentations
- · Parallel exhibition on 500m² (extendable) with expected 15-25 exhibitors
- · 200-250 expected attendees at the conference and exhibition



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