

3DBODY.TECH 2023 - PROGRAM



14th 3DBODY.TECH Conference & Expo Lugano, Switzerland · 17-18 October 2023

www.3dbody.tech

Program Outline

3DBODY.TECH 2023 ONSITE + ONLINE, Lugano, Switzerland, 17-18 October 2023, https://3dbody.tech 14th International Conference and Exhibition on 3D Body Scanning and Processing Technologies CEST (Central European Summer Time) UTC+2 - Time Zone Rome/Paris/Berlin/Madrid					
Time	Tuesday 17 October 2023			Wednesday 18 October 2023	
08:00	Registration		Exhibition Setup	Registration	
09:00	Opening Session		Exhibition	Technical Session 7 3D Digital Humans, Avatars, Body Modeling	Technical Session 8 3D/4D Body Scanning for Apparel II
10:00	Coffee Break			Coffee Break	
11:00	Technical Session 1 Digital Anthropometry & Sizing Surveys	Technical Session 2 3D/4D Body Scanning Systems & Uses I	Exhibitors Live Stream 1	Technical Session 9 3D/4D Body Technologies for Health & Sport	Technical Session 10 3D/4D Body Scanning Systems & Uses III
12:00	Lunch Break			Lunch Break	
13:00	Lunch Break		Exhibitors Live Stream 2	Technical Session 11 3D Body Scanning in Medicine II	Technical Session 12 3D/4D Body Scanning Systems & Uses IV
14:00	Technical Session 3 3D Body Scanning in Medicine I	Technical Session 4 3D/4D Body Scanning for Apparel I		Coffee Break	
15:00	Coffee Break		Exhibitors Live Stream 3	Panel Discussion	
16:00	Technical Session 5 3D/4D Body Processing	Technical Session 6 3D/4D Body Scanning Systems & Uses II		Break	
17:00	Coffee Break		Exhibitors Live Stream 3	Technical Session 13 3D/4D Technologies for Apparel	Technical Session 14 3D Foot Scanning
18:00	Welcome Cocktail			Closing Session	
19:00	Welcome Cocktail			Onsite Exhibition Breakdown	

Conference Office

Conference office: HOMETRICA CONSULTING - Dr. Nicola D'Apuzzo
Contrada Maggiore 2, CH-6612 Ascona, Switzerland
Conference website: <https://3dbody.tech> info@3dbody.tech
Conference phones: +41.91.791.5524



3DBODY.TECH 2023 - PROGRAM

14th 3DBODY.TECH Conference & Expo · Lugano, Switzerland · 17-18 October 2023 · <https://3dbody.tech>

Tuesday 17 October 2023 - CEST (Central European Summer Time) UTC+2 - TimeZone Zurich/Rome/Paris/Berlin/Madrid

08:00-09:20 **Registration** – Welcome Desk / **Pre-conference 1-on-1 Networking**

09:20-10:30 **Opening Session** – Room B1 / Track 2 Blue

09:20 Welcome Speech from the Conference Director
Nicola D'APUZZO, Hometrica Consulting, Switzerland

09:40 World Premieres, Product Launches and Announcements from GOLD & SILVER Exhibitors
 3dMD (USA), Esenca (UK), Avalution (Germany), Styku (USA), IBV (Spain),
Astrivis Technologies (Switzerland), VyoO (Canada), Size Stream (USA),
 Crisalix (Switzerland), Prism Labs (Austria/USA), Copresence (Germany), ESPER (UK)



10:30-11:10 **Coffee Break** – Foyer / **1-on-1 Networking**

11:10-12:40 **Technical Session 1: Digital Anthropometry & Sizing Surveys** – Room C / Track 1 Green


Session Chair: Dr Junfeng PENG - R&D Engineer at Digital Human Modelling Laboratory, Decathlon Sportslab, France

11:10 SizeWorld CHINA: Unveiling Evolving Body Shapes and Consumer Insights in the Chinese Market
Raphael LANG
Avalution GmbH, Keiserslautern, Germany #10




11:32 3D Scans of Toddlers and Kids - A Serial Measurement Survey
Anke KLEPSEK, Christine LÖRCHER, Angela MAHRERHARDT, Andreas SCHENK, Flora ZANGUE, Simone MORLOCK
Hohenstein Laboratories GmbH & Co. KG, Boennigheim, Germany #36

11:54 A Case for Standardization of Body Measurement Definitions: Investigation of Torso Girths
Adriana PETROVA 1, Fatma BAYTAR 2
1 Oklahoma State University, Stillwater OK, USA; 2 Cornell University, Ithaca NY, USA #41


12:16 Analysis of Variance in Neutral Gaze Head Orientation During 3D Head Anthropometry Data Collection
 Thomas M. SCHNIEDERS, Karen BREDENKAMP, Maral DANESHYAN
Magic Leap, Plantation FL, USA #22

11:10-12:40 **Technical Session 2: 3D/4D Body Scanning Systems & Uses I** – Room B1 / Track 2 Blue


Session Chair: Prof Dr Yordan KYOSEV - Chair Holder at ITM, Chair of Dev. and Assembly of Textile Products, TU Dresden, Germany

11:10 Should I Move to a 4D Scanner?
 Beatriz MAÑAS BALLESTER
Instituto de Biomecánica de Valencia IBV, Valencia, Spain #09




11:32 Multi-Zone 4D Body Capture for Achieving 'Near Ground Truth' Safe Avatars
 Chris LANE
3dMD LLC, Atlanta GA, USA #02



11:54 Improvements in Mobile 3D Body Scanning and Body Measurements
 Steven C. HAUSER, Matthew S. GILMER, David BRUNER
Size Stream LLC, Cary NC, USA #07



12:16 Accuracy, Precision and Appearance of 3D Human Avatars Using a Mobile Phone
 Stephen RAYMOND
Prism Labs Inc., Santa Monica CA, USA #62



11:30-12:15 **Onsite Exhibitors Live Stream 1** – Track 3 Rose

11:30-11:45 Live Demonstration & Presentation from the Exhibition Room - Esenca (UK)



12:00-12:15 Live Demonstration & Presentation from the Exhibition Room - Footprint Technologies (Germany)






12:40-14:10 **Lunch Break** – Foyer / **1-on-1 Networking**

14:10-16:00 Technical Session 3: 3D Body Scanning in Medicine I – Room C / Track 1 Green

Session Chair: Prof Marco A. MINETTO - Assoc. Prof. of Physical and Rehabilitative Medicine, Univ. of Turin, Dept. Surgical Sciences, Italy

14:10 Body 3D Reconstruction for Aesthetic Medicine


   Janna ESCUR, Cristina PUNTÍ, Pol CASELLES, Ibrar MALIK, Gil TRIGINER, Jaime GARCÍA
Crisalix SA, Lausanne, Switzerland #58



14:32 Smartphone-Based Photogrammetry for Craniofacial 3D Modelling: A Preliminary Test

Omar C. QUISPE-ENRIQUEZ, Juan José VALERO-LANZUELA, Sergio BASELGA, Gaspar MORA-NAVARRO, José Luis LERMA
Photogrammetry and Laser Scanning Research Group (GIFLE), Department of Cartographic Engineering,
Geodesy and Photogrammetry, Universitat Politècnica de València, Valencia, Spain #15

14:54 Prediction of Osteoporosis Site Using Artificial Intelligence: A Preliminary Study

 Jong Soo HAN 1, Yuna YOUN 1, Ju Hee KIM 1, Hye Jin WON 2, Seung Woo HONG 2,
Sharry LEE 1, Ha Eun LEE 1, Jae Hyeong KIM 1, Jin-Hyeok HWANG 1
1 Seoul National University Bundang Hospital, Gyeonggi, South Korea; 2 MINDS AND COMPANY, Seoul, South Korea #16

15:16 3D Scanning in Forensics - The Virtopsy Project and the Future

Michael THALI
Institute of Forensic Medicine, University of Zurich, Switzerland #69


15:38 A Reproducible Procedure for Individual Fitting in Orthotics and Prosthetics

 Antonius KÖSTER
Antonius Köster GmbH & Co. KG, Meschede, Germany #71

14:10-16:00 Technical Session 4: 3D/4D Body Scanning for Apparel I – Room B1 / Track 2 Blue

Session Chair: Dr Fatma BAYTAR - Assistant Professor in the Dept. of Fiber Science and Apparel Design at Cornell University, USA


14:10 Quantitative Fit Assessment for Smart Gloves

 Minji YU 1,2, Rachael GRANBERRY 1, James HALLAM 1
1 Meta Reality Labs, Redmond, WA, USA; 2 University of Minnesota, St. Paul, MN, USA #11

14:32 Investigation of the Interaction between Protective Clothing and Body During

 Motion Actions with Integrated Multisensory Scanning System 4Dsense
Felix KUNZELMANN 1, Yordan KYOSEV 1, Natalija SADRETDINOVA 1,2
1 Technische Universität Dresden, Chair of Development and Assembly of Textile Products, Dresden, Germany;
2 Kyiv National University of Technologies and Design, Kyiv, Ukraine #21

14:54 A Statistical Size Recommender for Safety Footwear Based on 3D Foot Data

 Jorge VALERO 1, Alfredo BALLESTER 1, Beatriz NACHER 1, Clara SOLVES 1,
Cataldo DE LUCA 2, Marta PESCE 2, Sandra ALEMANY 1
1 Instituto de Biomecánica de Valencia IBV, Valencia, Spain; 2 Base Protection S.r.l., Barletta, Italy #40



15:16 Understanding Clothing Insulation with Help of Virtual Tools - Case Study of Fire Fighter Clothing

Lena PARVUS 1,2, Agnes PSIKUTA 1
1 Empa - Swiss Federal Laboratories for Material Science and Technology,
Laboratory for Biomimetic Membranes and Textiles, St. Gallen, Switzerland;
2 Reutlingen University, Reutlingen, Germany #63

14:30-15:45 Onsite Exhibitors Live Stream 2 – Track 3 Rose

14:30-14:45 Live Demonstration & Presentation from the Exhibition Room - Rigsters (Denmark)



15:00-15:15 Live Demonstration & Presentation from the Exhibition Room - Astrivis Technologies (Switzerland)



15:30-15:45 Live Demonstration & Presentation from the Exhibition Room - VyoO (Canada)




16:00-16:40 Coffee Break – Foyer / 1-on-1 Networking

16:40-18:30 Technical Session 5: 3D/4D Body Processing – Room C / Track 1 Green

Session Chair: Dr Adriana PETROVA, Assoc. Prof. at the Dept. of Design, Housing and Merchandising at Oklahoma State Univ., USA


16:40 Comparative Analysis of Tools for Processing 3D and 4D Scan Data to Study Deformations in the Human Body

 Ann-Malin SCHMIDT, Yordan KYOSEV
ITM, Chair of Development and Assembly of Textile Products, TU Dresden, Germany #19

17:02 Challenges We Faced (and Are Facing) in Implementing an Automated Solution for Digital Anthropometry

Rajesh BHARTIYA, Shilpa BHARTIYA, Pankaj CHOUDHARI, Zeba INAMDAR
ProtoTech Solutions and Services Pvt. Ltd., India #44

17:24 Building Novel Dynamic Pattern Theory via 3D Body Scanning Data

 Simeon GILL 1, Carol MCDONALD 2, Katy SCHILDMEYER 3, Dana TODD 4,5
1 The University of Manchester, Manchester, UK; 2 Gneiss Concept, Washougal WA, USA;
3 KS Apparel Design, Utah, USA; 4 Balodana, Illinois, USA; 5 OCAC Open Circle Apparel Coalition, Illinois, USA #45


17:46 3D Body Scanning Applied for Human Torso Evaluation

Mahendran BALASUBRAMANIAN
Texas Tech University, Lubbock TX, USA #27


remote/online


16:40-18:30 Technical Session 6: 3D/4D Body Scanning Systems & Uses II – Room B1 / Track 2 Blue

Session Chair: Markus MAURER - Head of BU Automation at VITRONIC Dr.-Ing. Stein Bildverarbeitungssysteme GmbH, Germany


- 16:40  The Advantages of Real-World 4D Human Data Use Over Synthetic Data for Advanced Human Factors and AI-Driven Human Perception Applications
Andrew AUBREY, Kelly DUNCAN
3dMD LLC, Atlanta GA, USA #03



- 17:02  A Primer on Volumetric Video by Arcturus
Kamal MISTRY
Arcturus, Los Angeles CA, USA #66


- 17:24  Volumetric Capturing with Emergent Vision Technologies - From Pixel to Reality
Thomas DETJEN
Emergent Vision Technologies GmbH, Kernen im Remstal, Germany #37



- 17:46  4D Scanning and Volumetric Capture - Introduction and Technical Overview
Andrew SEARLE
IO Industries Inc. London ON, Canada #01

remote/online



- 18:08  The Scan Truck: Premier Mobile 3D Capture Solutions
Jiggs LOVE, Vlad GALAT
The Scan Truck, Los Angeles CA, USA #64

remote/online

17:00-17:45 Onsite Exhibitors Live Stream 3 – Track 3 Rose

- 17:00-17:15 Live Demonstration & Presentation from the Exhibition Room - Copresence (Switzerland/Germany).



- 17:30-17:45 Live Demonstration & Presentation from the Exhibition Room - Size Stream (USA)




18:30-21:00 Welcome Cocktail / 1-on-1 Networking

Wednesday 18 October 2023 - CEST - UTC+2 - Time Zone Zurich/Rome/Paris/Berlin/Madrid


08:00-09:10 Registration – Welcome Desk / 1-on-1 Networking

09:10-10:20 Technical Session 7: 3D Digital Humans, Avatars, Body Modeling – Room C / Track 1 Green

Session Chair: Dr Thomas SCHNIEDERS - Senior Human Factors Engineer at Magic Leap, USA

- 09:10  FLSH - Friendly Library for the Simulation of Humans
Pablo RAMÓN, Cristian ROMERO, Javier TAPIA, Miguel A. OTADUY
Universidad Rey Juan Carlos, Madrid, Spain #20


- 09:33  Skinning Weights Optimization Through Data-Driven Approaches: Implementation of a Skin Shape Method
Alejandra POLANCO 1, Yoann LAFON 1, Georges BEURIER 1, Junfeng PENG 2, Xuguang WANG 1
1 Univ. Lyon, Univ Gustave Eiffel, Univ Claude Bernard Lyon 1, LBMC UMR_T, Lyon, France;
2 Digital Human Modelling Laboratory, Decathlon Sportslab, Lille, France #29


- 09:56  Meshcapade's Digital Human Platform
Naureen MAHMOOD
Meshcapade GmbH, Tuebingen, Germany #06




09:10-10:20 Technical Session 8: 3D/4D Body Scanning for Apparel II – Room B1 / Track 2 Blue

Session Chair: Dr Evridiki PAPACHRISTOU - Assistant Professor at the School of Design Sciences, International Hellenic University, Greece

- 09:10  How Does Customers' Fit Preference Impact Apparel Size Selection for Online Shopping?
Junfeng PENG, Simon DURAFFOURG
Digital Human Modelling Laboratory, Decathlon Sportslab, Lille, France #60

- 09:33  Predicting Human Body Measurements Using MediaPipe Pose Auto-Capture
Wenjia ZONG 1, Jianyi YANG 2, Fatma BAYTAR 1
1 Department of Human Centered Design, Cornell University, Ithaca NY, USA; 2 Lacuna Technology LLC, Irvine CA, USA #33

- 09:56  Approach for Digitizing the Softness of Human Tissue for Implementation in 3D Soft Avatar Clothing Simulations
Elena Alida BRAKE 1, Michael DANNER 1, Gabriela KOSEL 1, Yordan KYOSEV 2,
Matthias RÄTSCH 1, Holger CEBULLA 3, Katerina ROSE 1
1 Reutlingen Research Institute, Reutlingen, Germany;
2 ITM, Technische Universität Dresden, Dresden, Germany;
3 Technische Universität Chemnitz, Institute of Lightweight Structures, Chair of Textile Technology, Chemnitz, Germany #59


09:45-10:00 Onsite Exhibitors Live Stream 4 – Track 3 Rose

- 09:45-10:00 Live Demonstration & Presentation from the Exhibition Room - Scaneca (Germany)






11:00-12:10 **Technical Session 9: 3D/4D Body Technologies for Health & Sport** – Room C / Track 1 Green


Session Chair: Prof Marco A. MINETTO - Assoc. Prof. of Physical and Rehabilitative Medicine, Univ. of Turin, Dept. Surgical Sciences, Italy

11:00 **New Body Composition Metrics from Size Stream 3D Body Scanning**
 David BRUNER, Breck SIEGLINGER, Richard ALLEN
Size Stream LLC, Cary NC, USA #31
11:23 **Mapping the Body to Screen for Clinical Health Conditions and Athletic Prowess: Implications for Health Literacy and Athlete Identification**
 Joshua D. DEXHEIMER 1,2
1 University of Southern California, Division of Biokinesiology and Physical Therapy, San Diego CA, USA
2 Styku LLC, Los Angeles CA, USA #38
11:46 **Dynamic Scanning of Cyclists: Techniques and Applications**
 Dries MATTHYS 1, Alexander VAN GASTEL 1, Jochen VLEUGELS 1,
Ann-Malin SCHMIDT 2, Yordan KYOSEV 2, Stijn VERWULGEN 1
1 Product Development, Faculty of Design Sciences, University of Antwerp, Belgium;
2 ITM, TU Dresden, Dresden, Germany #52
11:00-12:10 **Technical Session 10: 3D/4D Body Scanning Systems & Uses III** – Room B1 / Track 2 Blue

Session Chair: Prof Nikolaos BILALIS - Professor at Technical University of Crete, Greece

11:00 **Revolutionizing Intelligent Sizing with Esenca's AI Body Measurement Solution**
 Eduard COJOCEA
Esenca Ltd., London, UK #54
11:23 **Real-time Photogrammetry 3D Scan of Body Parts for Smartphones**
 Olivier SAURER
Astrivis Technologies AG, Zurich, Switzerland #14
11:46 **Scanning Head Avatars in the Wild - Challenges and Applications**
 Titus LEISTNER
COPRESENCE GmbH, Heidelberg, Germany #55
remote/online11:15-11:30 **Onsite Exhibitors Live Stream 5** – Track 3 Rose11:15-11:30 **Live Demonstration & Presentation from the Exhibition Room - IBV (Spain)**12:10-13:20 **Lunch Break - Foyer / 1-on-1 Networking**13:20-14:50 **Technical Session 11: 3D Body Scanning in Medicine II** – Room C / Track 1 Green

Session Chair: Prof José Luis LERMA - Prof. at Dept. of Cartographic Eng., Geodesy and Photogrammetry, Univ. Politècnica de València, Spain

13:20 **3D Scan to Knit - Workflow and Challenges of Automated Data Processing and Knit Program Generation for Prosthesis Liners**Anselm NAAKE 1, Ingrid PERAZA 1, Yordan KYOSEV 1, Florian WIECZOREK 2
1 Technische Universität Dresden, ITM, Dresden, Germany;
2 Smart Textiles Hub GmbH, Dresden, Germany #5613:42 **A Comparative Study of the Sagittal and Coronal Plane Balance of the Spine Measured Using a 3D Full Body Scanner and Spine X-Ray**Tae Hoon KANG 1, Minseok CHOI 2, Yewon CHOI 3, Jungwon KIM 3, Jae Hyup LEE 1,4, Yohan LEE 1,4, Minjoon CHO 1
1 Dept. of Orthopedics, SMG-SNU BRM Medical Center, Seoul, South Korea;
2 Dept. of Orthopedics, Seoul National University Hospital, Seoul, South Korea;
3 Medical Device Industry Promotion Foundation (MeDiF), Seoul, South Korea;
4 Dept. of Orthopedics, College of Medicine, Seoul National University, Seoul, South Korea #1814:04 **Correlation between Low Skeletal Muscle Index and 3D Anthropometric Data of Lower Extremities Measured by 3D Body Scanner**Kyu Wan KIM, Yohan LEE
Dept. of Orthopaedic Surgery, Seoul National Univ., College of Medicine,
SMG-SNU Boramae Medical Center, Seoul, S. Korea #2614:26 **Accuracy Comparison of 3D Face Scans Obtained by Portable Stereophotogrammetry and Smartphone Applications**
 Lina VAN LINT 1,2, Lynn CHRISTIAENS 1,2, Valerie STROO 1,2,
Michel BILA 1,2, Robin WILLAERT 1,2, Yi SUN 1,2, Jeroen VAN DESSEL 1,2
1 OMFS-IMPACT Research Group, Department of Imaging & Pathology, Faculty of Medicine, KU Leuven, Belgium;
2 Oral and Maxillofacial Surgery, University Hospitals Leuven, Leuven, Belgium #70

13:20-14:50 **Technical Session 12: 3D/4D Body Scanning Systems & Uses IV** – Room B1 / Track 2 Blue

Session Chair: Dr James KUANG - Department of National Defence, Canada

13:20 **Inclusive Data Collections - Approach and Challenges**
Matthew BENNETT
Human Solutions of North America Inc., Morrisville NC, USA #05



13:42 **CHECKER: Real-time Scan Quality Checking and Associated User Experience**
Matthew S. GILMER, Steven C. HAUSER, David BRUNER
Size Stream LLC, Cary NC, USA #30



14:04 **Protocols for High-Quality Indoor and Outdoor Scanning of Clothed People**
Kristijan BARTOL, Stefan GUMHOLD
TU Dresden, Faculty of Computer Science, Dresden, Germany #47



14:26 **Automation of Photogrammetry Capture - Tools and Methods**
Iulian DRUG, Aleksandr JAKOVLEV
Rigsters, Copenhagen, Denmark #68



13:45-14:30 **Onsite Exhibitors Live Stream 6** – Track 3 Rose

13:45-14:00 **Live Demonstration & Presentation from the Exhibition Room - Prism Labs (USA/Austria)**



14:50-15:20 **Coffee Break - Foyer / 1-on-1 Networking**

15:20-16:00 **Panel Discussion** – Room B1 / Track 2 Blue

Moderator: Dr Nicola D'APUZZO - 3DBODY.TECH Conference Director, Hometrica Consulting, Switzerland

15:20 **How to Efficiently and Securely Exploit 3D & 4D Body Scan Data?**
Chris LANE, Co-Founder, CEO & CTO, 3dMD, USA
Anita HAVELE, Executive Director, Web3D Consortium, USA
Raj SAREEN, CEO & Founder, Styku, USA
Kamal MISTRY, CEO & Founder, Arcturus, USA
Sandra ALEMANY MUT, 3D Anthropometry Lead Researcher, IBV, Spain

16:00-16:20 **Short Break - Foyer / 1-on-1 Networking**

16:20-17:50 **Technical Session 13: 3D/4D Technologies for Apparel** – Room C / Track 1 Green

Session Chair: Prof Dr Michael ERNST - Head of Product Development, VirtualLab at Niederrhein University, Germany

16:20 **3D Scanning Technology for the Rapid Modelling of Fashion Clothing**
Michail KASERIS 1, Apostolos BOUMPAKIS 1, Nikolaos KLADOVASILAKIS 1, Vasileios PISSAS 2, Paschalis CHARALAMPOUS 1, Ioannis KOSTAVELIS 1, Evridiki PAPACHRISTOU 2,3, Sotirios MALASSIOTIS 1, Nikolaos BILALIS 2, Dimitrios TZOVARAS 1
1 Information Technology Institute, Thessaloniki, Greece; 2 Technical University of Crete, Chania, Greece; 3 International Hellenic University, Greece #46



16:42 **A Comparative Study of 3D Simulation and Scanning Technologies for Virtual Fabric Testing Laboratory: Tensile Tester**
Ziwen QIU, Seonyoung YOUN, Kavita MATHUR, Anne PORTERFIELD
Wilson College of Textile, North Carolina State University, Raleigh NC, USA #17



remote/online

16:20-17:50 **Technical Session 14: 3D Foot Scanning** – Room B1 / Track 2 Blue

Session Chair: Prof José Luis LERMA - Prof. at Dept. of Cartographic Eng., Geodesy and Photogrammetry, Univ. Politècnica de València, Spain

16:20 **Leveraging Key-Point Detection to Prevent Shoe Returns in Online Shopping**
Andrés PRADA GONZÁLEZ, Matthias BRENDEL
Footprint Technologies GmbH, Berlin, Germany #39



16:42 **Practical Aspects of 3D Scanning Results Application in Shoe Last Design**
Liliia CHERTENKO, Dariia KAPTIUROVA, Olexander BONDAR
Fashion Technologies Department, Kyiv National University of Technologies and Design, Kiev, Ukraine #28

remote/online

17:04 **Methodological and Statistical Approaches for the Assessment of Foot Shape Using Three-Dimensional Foot Scanning: A Scoping Review**
Jamie J. ALLAN 1, Shannon E. MUNTEANU 1, Daniel R. BONANNO 1, Andrew K. BULDT 1, Simon CHOPPIN 2, Alice BULLAS 2, Natalie PEARCE 3, Hylton B. MENZ 1
1 Discipline of Podiatry, School of Allied Health, Human Services and Sport, La Trobe University, Melbourne, Australia; 2 Advanced Wellbeing Research Centre, Sheffield Hallam University, UK; 3 La Trobe Library, La Trobe University, Australia #25

17:26 **Automated Shoe Metrology by X-Ray Computed Tomography**
Martin LEIPERT 1,2, Gabriel HERL 1, Michael MÜLLER 3, Joshua MESSKEMPER 3, Simon ZABLER 1
1 Deggendorf Institute of Technology, Deggendorf, Germany; 2 Pattern Recognition Lab, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany; 3 OneFID GmbH, Cologne, Germany #48



17:50-18:20 **Closing Session**

17:50 **Closing Speech from the Conference Director and Announcements for 3DBODY.TECH 2024**
Nicola D'APUZZO, Hometrica Consulting, Switzerland

Presentation/talk from **GOLD / SILVER / BRONZE / VIRTUAL** Exhibitor & Sponsor



Presentation/talk related to **MOBILE APP** solutions



Presentation/talk related to **4D & DYNAMIC** scanning, measurement, simulation, visualization



Presentation/talk related to **AI / ML** Artificial Intelligence & Machine Learning



Presentation/talk related to **Metaverse & VR / AR** Virtual & Augmented Reality



Presentation/talk related to **AM / 3D PRINT** Additive Manufacturing & 3D Printing



Live demonstration of 3D/4D equipment / solutions

GOLD Exhibitors & Sponsors

3dMD (USA/UK) <https://3dmd.com/>

3dMD, a proven leader in 3D high-precision anatomical scanning, will be demonstrating workflow efficiencies with its latest temporal-3D (4D) capture systems. 3dMD sequences of high-quality motion images of the full body, head, foot, and/or hand are supported by anthropometric measurement, projection and tracking apps to accelerate the development and training of innovative wearable technologies and devices that precisely adapt to their users' performance needs.



Avalution (Germany) <https://avalution.net/>

Avalution scans, measures, analyses and digitizes real people. The company has the world's largest body dimension database which contains the body scans of around 100,000 persons. Avalution also carries out serial measurement surveys and is a leader in the field of body scanning. Avalution makes size & fit and ergonomics measurable for product development in various industries.



Size Stream (USA) <https://sizestream.com/>

Size Stream is a leader in 3D body scanning technology located in the renowned Research Triangle Park in North Carolina. Founded in 2012, Size Stream is a wholly owned subsidiary of TAL Group. Apart from innovation in the 3D industry, the company focuses on providing services to several markets including apparel, weight-loss, and uniforms, covering a worldwide network of customers. EveryBODY connected.



Instituto de Biomecánica IBV (Spain) <https://anthropometry.ibv.org/>

The Instituto de Biomecánica IBV supports innovative business models and research based on user anthropometry, by using advanced 3D data treatment tools (accurate and automated creation of 3D body avatars from 3D raw scans, 2D pictures or 1D measurements; 3D databases harmonisation tools, virtual measuring tape or shape analysis tools), smartphone 3D scanning technologies, and breakthrough 4D scanning technology.



ESPER (UK) <https://esperhq.com/>

ESPER is a world leading innovator in 3D scanning systems and multi-camera equipment. ESPER builds state-of-the-art 3D scanning systems & multi-camera technology for game & VFX studios, academia, advertising, cultural heritage, scanning services & bullet-time photography.



Prism Labs (USA/Austria) <https://prismlabs.tech/>

Fast, convenient, cutting-edge, intelligent health tracking. Prism Labs provides the most accurate 3D bodymaps from a mobile phone camera.



SILVER Exhibitors & Sponsors

Astrivis Technologies (Switzerland) <https://astrivis.com/>

Astrivis Technologies specializes in mobile 3D body scanning solutions for both iOS and Android devices. The solution turns any mobile device into a 3D scanner without requiring additional hardware, providing real-time feedback of the scanned model. Users can conduct rapid and accurate 3D scans of different body parts such as face, legs, feet, etc., and extract measurements or calculate volume for a wide range of portable application scenarios.



Styku (USA) <https://www.styku.com/>

The patented 3D imaging technology and health coaching platform of Styku drive awareness of health risks with a 35-second non-invasive scan. Styku is a B2B enterprise solution, with over 1400 active businesses using Styku's product servicing the fitness, physical therapy, primary care, med-spa, hospital, and weight-loss verticals. Over 1.2M users use Styku to quickly assess their body shape, biometrics, and health risks and then work with professionals to improve their health outcomes.



Esenca (UK) <https://esenca.app/>

Esenca is an AI body measurement solution that uses state-of-the-art technology to give your customers instant sizing recommendations and provide you with insights into their needs. Esenca can be seamlessly integrated into any website and accessed from any web browser, allowing users to get more than 100 body measurements and sizing recommendations in less than 2 seconds of inference time.



Copresence (Switzerland/Germany) <https://copresence.tech/>

Copresence has developed a groundbreaking AI technology that democratizes access to high-resolution photorealistic avatars. By creating scanning technology compatible with any smartphone (three simple steps, no special hardware needed), this innovation unlocks various digital communication use cases and enhances the overall experience of gaming and metaverse applications.



Crisalix (Switzerland) <https://crisalix.com/>

Crisalix is a world's leading tech company in the field of 3D aesthetic simulation. Its unique technology is based on the most recent advances in AI, CV and AR and it permits the creation of highly accurate 3D reconstructions of human bodies and the simulation of aesthetic procedures on top. Its disruptive technology caters to some of the world's most recognized plastic surgeons and clinics across 5 continents.



SILVER Exhibitors & Sponsors (cont.)

VyoO (Canada) <https://www.vyoo.ai/>

VyoO, a pioneering deep tech firm, excels in AI and 3D technology, introducing an innovative anthropometric solution that reconstructs and analyzes bodies from simple smartphone videos. Transforming online shopping, VyoO guarantees precise body measurements for perfectly fitting clothes and accessories, minimizing size discrepancies and enhancing customization.



VIRTUAL SILVER Exhibitors & Sponsors

IEEE-SA (USA) <https://standards.ieee.org/industry-connections/3d/bodyprocessing.html>

The IEEE-SA is a leading consensus building organization that nurtures, develops and advances global technologies. IEEE standards drive the functionality, capabilities and interoperability of a wide range of products and services that transform the way people live, work and communicate, including IEEE's Industry Connections program on 3D Body Processing.



Reactive Reality (Austria) <https://reactivereality.com/>

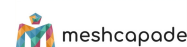
Reactive Reality is the leading provider of virtual try-on and virtual fashion image generation technology. Its PICTOFit platform enables fashion brands and retailers to seamlessly integrate virtual dressing rooms and photorealistic avatars into their website, app, and in-store solutions. For consumers, the platform creates photorealistic avatars of shoppers, enabling accurate size recommendations across brands.



BRONZE Exhibitors & Sponsors

Meshcapade (Germany) <https://meshcapade.com/>

Meshcapade is a startup creating realistic human avatars for use in research, apparel, biomechanics, virtual reality and film. The nuances of human shape and movement are modeled by using machine learning and computer vision. Meshcapade builds automation from 3D & 4D scans, RGB-D sequences, Mocap, IMU and image data. Meshcapade brings realistic human models to life in everyday environments.



Emergent Vision Technologies (Germany/Canada) <https://emergentvisiontec.com/>

Emergent Vision Technologies celebrates 16 years since it began its journey as the leading high-speed imaging camera manufacturer in 2007. In its history, the company has seen its 10GigE, 25GigE, 50GigE, and 100GigE cameras deployed into innovative, disparate applications, including machine vision inspection, sports technology, broadcasting, volumetric capture and the metaverse, intelligent transportation, virtual reality, augmented reality, and life sciences.



Foot Print Technologies (Germany) <https://footprinttech.de/>

Foot Print Technologies is a young, ambitious start-up located in Berlin. Based on Artificial Intelligence, Foot Print Technologies has developed a technology to measure feet to find the best fitting shoes. Foot Print Technologies avoids returns and makes online shopping individual and more sustainable, by using its smartphone-based foot measurement and size recommendation technology.



Rigsters (Denmark) <https://rigsters.com/>

Rigsters specializes in the development of hardware and software solutions for efficient photogrammetry data capture, with a commitment to creating tools that make mass 3D digitization more accessible.



Scaneca (Germany) <https://scaneca.com/>

In one measurement process, Scaneca creates a detailed virtual copy of your body, performs a posture analysis, determines the most important health-related parameters and measures body circumferences. Scaneca provides an objective view of the entire body and helps define individual training and therapy goals.



Web3D Consortium (USA) <https://www.web3d.org/>

Web3D Consortium, founded in 1997, is an International, non-profit, member-funded, industry standards development organization. Web3D Consortium develops and maintains royalty-free ISO standards for web-based 3D graphics.



VIRTUAL/BASIC Exhibitors & Sponsors

IO Industries (Canada) <https://ioindustries.com/>

IO Industries designs cutting-edge digital video equipment, providing customers with high performance and high quality solutions for all types of digital video applications. Whether it's a pair of cameras in a 3D stereoscopic rig, a handful of cameras for a 360° VR configuration, or an array of over 100+ cameras set up for volumetric video capture, IO Industries cameras have the features and flexibility it takes to make these configurations happen.



3DBODY.TECH Conference & Expo Venue: Lugano Convention Center & Online Conference Platform

3DBODY.TECH Conference & Expo will take place at the 1st floor of the Lugano Convention Center.

Address: Palazzo dei Congressi, Piazza Indipendenza 4, 6900 Lugano, Switzerland <https://luganoconventions.com>

The 3DBODY.TECH 2023 online conference platform will be accessible to all onsite and online attendees, speakers, exhibitors.

