
Editorial

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Biographical notes: Chang Shu is a Research Scientist at the National Research Council of Canada. He is also an Adjunct Research Professor at the Carleton University. He received his PhD in Computer Science from the Queen Mary College, University of London, UK in 1992, and BSc from the Harbin Institute of Technology, China in 1985. His research has been focused on processing and analysis of 3D anthropometric data and their applications in industrial design and ergonomics.

Peng Li is a Computer Scientist in the US Army Natick Soldier Research, Development and Engineering Center and working in the applications of 3D scanning technology for 3D anthropometry, human equipment interface evaluation and surface modelling. He received his BEng in Electrical Engineering from the Tsinghua University, Beijing, China in 1982 and PhD in Human Science from the Loughborough University, UK in 1997.

The present edition of the *International Journal of the Digital Human* is a special issue on '3D anthropometric databases and their application'.

Various large-scale anthropometric data collections that contain 3D body scans and corresponding anthropometric measurements have been conducted over the past two decades. The articles presented in this issue reflect a wide variety of topics related to the data collection and data analysis of the 3D surface anthropometry, and the applications of 3D databases. The first two articles, 'Anthropometry model generation based on ANSUR II database' and 'Application of massive 3D head and facial scan datasets in ergonomic head-product design', present efforts to effectively transfer 3D shapes of the human body to practical product design and human factor evaluation, based on 3D anthropometric databases. The third article, 'Data-driven three-dimensional reconstruction of human bodies using a mobile phone app', utilises the 3D shape models generated from an existing 3D scan database to facilitate a mobile phone app for 3D anthropometric data collection. The fourth article, 'Individualised avatars with complete anatomy constructed from the ANSUR II 3-D anthropometric database', represents a new dimension in 3D

human body modelling, namely incorporating internal anatomy into 3D surface scans of the human body. This leads to potential applications in physiological modelling and injury assessment/simulation at a population level. The final article, 'Comparing 2D image features on viewpoint independence using 3D anthropometric dataset', utilises a 3D body scan database to generate training images for a 2D shape classifier, which is an essential topic in the computer vision and machine learning domains and has applications in anthropometric landmark identification.

We hope this special issue has provided an overview of the current development in 3D anthropometry. We would like to thank all the authors who have submitted papers and reviewers who have given comments and suggestions for the improvements of the papers. We would also like to thank Dr. Shana Smith, Editor-in-Chief of the journal, whose support and guidance have been invaluable for this special issue.