



## RAVINDRA S. GOONETILLEKE, Ph.D.

Professor, Division of Integrative Systems and Design  
Professor, Department of Industrial Engineering and Decision Analytics  
Co-Director Dual Degree Program  
Hong Kong University of Science & Technology, Clear Water Bay, Kowloon  
Email: ravindra@ust.hk  
Home page: <http://www.ieda.ust.hk/dfaculty/ravi>  
Google h-index=37

### I. PERSONAL

#### Academic

- Ph.D. Ergonomics/Human Factors Engineering; June 1990  
State University of New York (SUNY) at Buffalo, New York
- M.S.A.E. Aerospace Engineering; June 1985  
Georgia Institute of Technology, Atlanta, Georgia
- M.S. Industrial Engineering; February 1984  
State University of New York (SUNY) at Buffalo, New York
- B.Sc.(Eng.) Mechanical Engineering (First Class Honors); January 1980  
University of Moratuwa, Sri Lanka

#### Employment

- Professor, Department of Industrial Engineering and Decision Analytics (IEDA), Hong Kong University of Science and Technology (HKUST), Hong Kong (1 July 2009 – *present*)
- Professor, Division of Integrative Systems and Design (ISD), Hong Kong University of Science and Technology, Hong Kong (1 Sept 2018 – *present*)
- Co-Director, Dual Degree Program (DDP) in Technology and Management, HKUST (Jan 2017- *present*)
- Program Lead for Design Thinking, HKUST (2013 - *present*)
- Associate Head, Department of Industrial Engineering and Logistics Management (IELM), Hong Kong University of Science and Technology, Hong Kong (Sept 2011 – Jan 2016)
- Associate Professor, Department of Industrial Engineering and Logistics Management (IELM), Hong Kong University of Science and Technology, Hong Kong (1 July 2000 – 30 June 2009)
- Assistant Professor, Department of Industrial Engineering and Engineering Management (IEEM), Hong Kong University of Science and Technology, Hong Kong (Sept 1994 - June 2000)
- Human Factors Manager/Researcher, NIKE, Inc. Beaverton, Oregon, USA (Sept. 1991 – June 1994)
- Senior Ergonomist/Project Manager/Trainer, Biomechanics Corp. of America (BCA), NY. (Jan. 1990 – Aug. 1991).
- Consulting Assistant, The Center for Industrial Effectiveness, NY, USA (Jan. 1988 – July 1989)
- Research Assistant, Department of Industrial Engineering, SUNY at Buffalo. (Aug 1985 – Dec 1987)



Team Leader, NIOSH project, 'Impact of Automation on Industrial Inspector Stress', SUNY at Buffalo. (1985-1987)

Research Assistant, School of Aerospace Engineering, Georgia Institute of Technology. (Sept 1983 – Aug 1985)

Teaching Assistant, Department of Industrial Engineering SUNY at Buffalo. (Aug 1981 – Aug 1983)

Research & Development Engineer, Brown & Company Ltd., Sri Lanka (Oct 1980 – Aug 1981)

Instructor, University of Moratuwa, Sri Lanka (Feb 1980 – Sept 1980)

Engineering Intern, Colombo Port Commission, Sri Lanka. (Jul 1978 – Apr 1979)

## **II. PROFESSIONAL ACTIVITIES**

### **Scientific and Honor Societies**

Fellow, Human Factors and Ergonomics Society (HFES), USA. elected in Sept 2013.

Fellow, International Ergonomics Association (IEA), elected in Aug 2018.

Fellow and Council Member, Hong Kong Ergonomics Society (HKES), elected in 2013.

Member, Institute of Electrical and Electronics Engineers, USA.

Member, American Institute of Industrial and System Engineers.

Member, American Psychology Association.

### **Professional Honors and Awards**

CASA/SME University Lead Award 2001 as member of AMI, HKUST

The School of Engineering, HKUST, Teaching Excellence Award 2004-2005

Teaching Excellence Appreciation Award – IEEM, Spring 2002, HKUST

Best Paper Award at the 4<sup>th</sup> APCHI/6<sup>th</sup> SEAES Conference (27 Nov – 1 Dec, 2000), Singapore. Paper: Lau Wing Chung, Shih, H. M., and Goonetilleke, R. S. Effect of cultural background when searching Chinese menus.

Teaching Excellence Appreciation Award – IEEM, Fall 1999, HKUST

Teaching Excellence Appreciation Award – IEEM, Spring 1997, HKUST

Academic Mentor Award 1997. South East Asian Ergonomics Society

Teaching Excellence Appreciation Award – IEEM, Fall 1995, HKUST

Mark Diamond Research Fund grant recipient in 1988/1989 at SUNY, Buffalo.

Fulbright Scholar, 1981/1982, U.S. Educational Foundation in Sri Lanka.

Best Allround Student (Sports and Academic) in 1978/1979 at the University of Moratuwa, Sri Lanka.

Scholarship on the results of B.Sc. Examination at the University of Moratuwa, Sri Lanka (1975-1979).

## Journal Editorship and Board Membership

Editor, International Journal of Industrial Ergonomics (Sept 2006-present);  
Senior Editor, Ergonomics in Design (2019 - present),  
Associate Editor, Ergonomics in Design (July 1994-2019),  
Associate Editor, Human Factors and Ergonomics in Manufacturing & Service Industries (Jan 2016-present),  
Associated Editor, International Journal of Human Factors Modelling and Simulation (Oct 2010-Sept 2018)  
Member, Editorial Board: International Journal of Industrial Ergonomics (Sept 1999-Sept 2006), International Journal of Human Factors and Ergonomics (IJHFE) (Sept 2010- present), Human Factors and Ergonomics in Manufacturing & Service Industries (July 2010-Dec 2015).  
Special Issue Editor, Human Factors and Ergonomics in Manufacturing, 2000, Vol 10 (1).  
Special Issue Editor, International Journal of Industrial Ergonomics, 2009, Vol 39(4).  
Special Issue Editor, International Journal of Human Factors Modelling and Simulation, 2011, Vol 2(4).

## Keynote, Plenary Talks and Guest Lectures

“A rethink of Ergonomics and Human Factors”. Keynote at National Human Factors and Ergonomics Seminar titled, “Ergonomics Beyond Efficiency”. Organized by Human Factors and Ergonomics Society of Malaysia. 22-23 October 2019.

“Quality care for the elderly” (2019). Keynote at 2019 Service Design in Digital Economy Summit Forum (服务设计推动数字经济发展), organized by: 動動三雄 [成都眼鏡視覺科技有限公司]. 30 March 2019. Chengdu, China.

“Pitfalls in big data visualization”. Invited keynote at: Indonesian Ergonomics Society (PEI) Conference, 7-9 November 2108. Medan, Indonesia.

“Design Thinking for Product and Service Design. Full-day workshop at “peran Ergonomi Dalam Ekonomi Digital Dan Global” Indonesian Ergonomics Society (PEI) Conference, 7-9 November 2018. Medan, Indonesia. <http://pei.or.id/images/ergonomi/seminar-pei-2018.jpeg>.

“Invisible Technology for the Aged”, Invited keynote. First Gerontechnology Symposium, 21 November 2017. Monash University, Malaysia.

“Design Thinking” one full-day workshop at Asia Pacific Design Challenge. 2<sup>nd</sup> November 2017. Luxton Hotel, Bandung Indonesia. <http://apdec.ti.unpar.ac.id/>

“Shock to Delight in Design”. Invited talk at Singapore University of Technology and Design. 26 June 2017.

“User-Centred Design for Sustainability”. Keynote at: 4th South-East Asian Network of Ergonomics Societies (SEANES) International conference on Human Factors and Ergonomics in South-East Asia. 28 Nov – 1 Dec 2016., Bandung, Indonesia.

“Show me the data”. Keynote at: Human Factors and Ergonomics Malaysia (HFEM) Conference, 26-27 Sept 2016. Kota Damansara, Malaysia

“How to be a good Teaching Assistant”. National Taiwan University of Science and Technology. Invited Talk 14 Jan 2016.

- “Best Practices on Teaching and Learning in Engineering Education”. Philippine Association of Engineering Schools (PAES), Inc 23<sup>rd</sup> October 2015.
- “Human-Centered Design for Big Data Visualization”. Keynote at: Human Factors and Ergonomics Society Malaysia (HFEM) 2015 Annual Conference, Aug 18 2015, Puchong Malaysia.
- “Ergonomics Risk Factors in the Office”. Mass Transit Railway (MTR) Management Presentation. June 23, 2015.
- “Technical Publications: Is it an art or science?” National Taiwan University of Science and Technology. Invited Talk 14 May 2015.
- “Technological Foundations of Footwear through User Interaction”. Keynote at 14th International conference on Information and Interaction Design (IIID2013). 7-8 Dec 2013, Shanghai, China
- “Footwear Design”. 2nd Human Factors and Ergonomics Society of Malaysia (HFEM) Annual Meeting & 2nd South Asian Network of Ergonomic Societies (SEANES ) Conference. 9-12 July 2012, Langkawi, Malaysia.
- “The next generation of comfortable footwear”. Keynote at Mass Customization & Personalization Conference Asia Pacific. Dec 6-8, 2010. Taipei, Taiwan.
- “Footwear Design for Comfort”. Invited keynote at the Sports Medicine and Rehabilitation Therapy (SMART) Convention CUHK-WHO Collaborating Centre for Sports Medicine and Health Promotion and the Asian Federation of Sports Medicine, August 16 2008, The Chinese University of Hong Kong.
- “Design for Comfort – An application to footwear”. Invited keynote at the Sports Medicine and Rehabilitation Therapy (SMART) Convention CUHK-WHO Collaborating Centre for Sports Medicine and Health Promotion and the Asian Federation of Sports Medicine, June 9-10, 2007, Prince of Wales Hospital, Hong Kong. Page 25.
- “Quality of Footwear Fit”. Plenary keynote talk at the Application of Science in Footwear Research and Development Symposium. Aug 18, 2005, Chinese University of Hong Kong.
- “The strategic advantage for Sri Lankan industries in the new millennium” 2-day Invited Workshop organized by Global Conventions, Sri Lanka. June 4-5, 2001
- “Office Ergonomics”. One-day Workshop organized by Global Conventions, Sri Lanka. June 6 2001
- “Anthropometry”. Workshop for Industry participants, Sarawak, Malaysia. March 24-27, 2000. Organized by the Human Factors and Ergonomics Society of Malaysia.
- “Designing footwear: back to basics in an effort to design for people”. Plenary Talk: 7th Southeast Asian Ergonomics Society (SEAES) and 4th Malaysian Ergonomics Conference (SEAMEC). Universiti Malaysia Sarawak, Kuching, Malaysia, 19-22 May 2003. pp. 25-31.
- “Aerobics Dance Exercise: A Survey of Physical Problems”. Keynote Presentation at the World Research Forum, IDEA Convention, July 19, 1992.
- “Ergonomics - The Strategic Advantage for the 90's”. Presentation at AKZO America Safety and Health Conference, Charleston, SC, May 1991.
- “Training Approaches of Control for Cumulative Trauma in the Workplace”. Presentation at the American Society of Safety Engineers Seminar (Central New York Chapter), Syracuse, NY, March 1991.
- “Ergonomic Task Analysis”. Invited presentation at the American Industrial Hygiene Association (Central Ohio Chapter) Conference, Columbus, OH, April 1990.
- “Practical Controls for Ergonomic Hazards”. Invited presentation at the American Industrial Hygiene Association Conference, Columbus, OH, April 1990.

“Cushioning and Comfort” Invited Seminar at Rehabilitation Center, HK Poly University on April 1 1995.

“Office Safety” Lecture to HKUST Office secretaries (April 28, 1995)

“Footwear Comfort” workshop with Dr. Richard So for 43 attendees. Organized by Clothing Industry Training Authority. (January 19,1996)

“Lighting”. Special lecture as part of “Introductory Ergonomics” course organized by the Hong Kong Ergonomics Society at the City University (31 March 2005).

### **III. EDUCATION**

#### **Teaching**

Division of Integrative Systems and Design

ISDN 2300 Digital Design (Undergraduate)

ISDN 2400 Physical Prototyping (Undergraduate)

Department of Industrial Engineering and Decision Analytics

IELM 115 Engineering Design and Communication (Undergraduate)

IELM 2150 Product Design (Undergraduate)

IELM 213 Ergonomics in Workplace Design (Undergraduate)

IELM 2145 Design Studio (Undergraduate)

IELM 365 Cognitive Engineering and Human Performance (Undergraduate)

IELM 4320 Design Thinking (Undergraduate) – in collaboration with the China Academy of Art

IELM 4650 Engineering Psychology (Undergraduate)

IELM 395 Human Factors in Design (Undergraduate)

IELM 532 Design for People (Graduate)

IELM 521 Research Methodology (Graduate)

IELM 536 Safety Management (Graduate)

EEMT 5260 Product Development Management (Graduate)

## IV. RESEARCH

Research interests include innovative design and development of products, design of culture-friendly products and systems, human performance modelling, development of sensation and perception theories

### A. Publications

#### A1. Peer-Reviewed Journals (Published and in Press):<sup>1</sup>

- Pang, Y. H., Hoffmann, E. R. and Goonetilleke R. S. (2019). Effects of gain and index of difficulty on mouse movement time and Fitts' law. *IEEE Transactions on Human-Machine Systems*. Dec, 49(6), 684-691. <https://doi.org/10.1109/THMS.2019.2931743>
- Kannan, P., Fung, B., Leung, R. W. C., Goonetilleke, R. S., Winser, S. J. (2019). Association between high-heeled shoes of varied heel height and bladder neck elevation in women: An exploratory study. *Footwear Science*, 11(2), 85-92.
- Kannan, P., Winser, S. J., Goonetilleke, R. S., Cheing, G. (2019). Ankle positions potentially facilitating greater maximal contraction of pelvic floor muscles: a systematic review and meta-analysis. *Disability and Rehabilitation* (in press). doi: 10.1080/09638288.2018.1468934
- Weerasinghe, T., Goonetilleke, R., Reischl, U. (2017). Pressure Thresholds and Stiffness on the Plantar Surface of the Human Foot. *Ergonomics*, 60(7), 985-996.
- Reischl, U., and Goonetilleke, R. (2016). Fabric Cooling by Water Evaporation. *Journal of Fiber Bioengineering and Informatics* 9 (4): 237-245
- Senanayake, R., and Goonetilleke, R. S. (2016). Pointing Devices performance in steering tasks. *Perceptual and Motor Skills*. Vol. 122(3) 886 – 910.
- Gao, Z., Sun, S. Q., Goonetilleke, R. S. and Chow, D. H. K. (2016). Effect of an on-hip load-carrying belt on physiological and perceptual responses during bimanual anterior load carriage. *Applied Ergonomics*, 55, July, 133-137.
- Yu, Chen*, Hoffmann, E. R. and Goonetilleke, R. S. (2015). Structure of Hand/Mouse Movements. *IEEE Transactions on Human-Machine Systems*, 45(6), 790-798.
- Senanayake, R., Goonetilleke, R. S. and Hoffmann, E. R. (2015). Targeted-tracking with Pointing Devices. *IEEE Transactions on Human-Machine Systems*. 45(4), August, 431-441.
- Teh, P.-L., Ahmed, P. K., Goonetilleke, R. S., Au, E. Y. L., Cheong, S. N., Yap, W. J. (2015). Technology Acceptance and Hand Anthropometry (TAHA) Model: Insights from Somatosensory Technology. *2015 Procedia Manufacturing* 3, 4197-4204
- Teh, P.-L., Ahmed, P. K., Goonetilleke, R. S., Au, E. Y.-L., Cheong, S.-N. (2014). Viewing versus experiencing in adopting somatosensory technology for smart applications. *Pacific Asia Journal of the Association for Information Systems*. September 2014, 6(3), 21-45.
- Senanayake, R., Hoffmann, E. R. and Goonetilleke, R. S. (2013). A model for combined targeting and tracking tasks in computer applications. *Experimental Brain Research*. November 2013, 231(3),367-379.
- Rodrigo, A. S.*, Goonetilleke, R.S., and *Xiong, S.* (2013). Load Distribution to Minimize Pressure Related Pain on Foot – A Model. *J. of Ergonomics*. Jul;56(7):1180-1193.

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<sup>1</sup> Students are indicated in italics.

- Xiong, S., Goonetilleke, R.S., Rodrigo, A. S., and Zhao, J. (2013). A model for the perception of surface pressure on human foot. *Applied Ergonomics*, 44(1), 1-10.
- Thibbotuwawa, N., and Hoffmann, E. R. and Goonetilleke, R. S. (2012). Open-loop and feedback-controlled mouse cursor movements in linear paths. *Ergonomics* Vol 55(4), March, 476-488.
- Zhao, J., Ding, Y., Goonetilleke, R. S., Xiong, S., Zhang, Y., Long, C., Yuan, Z. (2012). Interactive Deformation Simulation of Manual Girth Measurement for Limbs. *Information - An International Interdisciplinary Journal* Vol 15(1), January, 339-346.
- Luximon, Y. and Goonetilleke, R. S. (2012). Time use behavior in single and time-sharing task. *International Journal of Human-Computer Studies*. 70(5), May 332-345.
- Thibbotuwawa, N., Goonetilleke, R. S. and Hoffmann, E. R. (2012). Constrained path tracking at varying angles in a mouse tracking task. *Human Factors*, 54(1) February, 137 - 149.
- Rodrigo, W. D. A. S., Goonetilleke, R. S., and Witana, C. P. (2012). Model Based Foot Shape Classification Using 2D Foot Outlines. *Journal Computer-Aided Design*, 44, 48-55.
- Long, C., Zhao, J., Goonetilleke, R.S., and Xiong, S., Ding, Y., Yuan, Z., Zhang, Y. (2011). A New Region Growing Algorithm for Triangular Mesh Recovery from Scattered 3D Points. *Transactions on Edutainment VI, Lecture Notes in Computer Science 6758*, pp. 237-246.
- Au, E. Y. L., Goonetilleke, R. S., Witana, C. P. and Xiong, S. (2011). A methodology for determining the allowances for fitting footwear. *Int. J. Human Factors Modelling and Simulation*, 2(4), 341-366.
- Weerasinghe, T. W., and Goonetilleke, R. S. (2011). Getting to the bottom of footwear customization. *Journal of Systems Science and Systems Engineering*, 20(3), 310-322.
- Xiong, S. and Goonetilleke, R. S., Zuhua Jian (2011). Pressure thresholds of the human foot: measurement reliability and effects of stimulus characteristics. *Ergonomics* Vol 54(3), March, 282-293. Erratum Vol. 54(4), 412.
- Reischl, U., Goonetilleke, R., Mijovic, B., Skenderi, Z. (2011). Thermal Characteristics of Infrared Radiation Protective Vests. *Sigurnost Journal of Safety*, 53(1) 51-56, 2011.
- Ding, Y., Zhao, J., Goonetilleke, R. S., Xiong, S., Yuan, Z. Zhang, Y., Long, C. (2010). An Automatic Method for Measuring Foot Girths for Custom Footwear Using Local RBF Implicit Surfaces. *International Journal of Computer Integrated Manufacturing*. Vol. 23( 6), June 2010, 574–583.
- Zhang, Y. and Goonetilleke, R. S. (2010). The relationship between monochronicity, polychronicity and individual characteristics. *Behaviour & Information Technology*, Volume 29(2) March 2010, pages 187-198.
- Xiong, S., Goonetilleke, R.S., Witana, C. P. and Au, E. Y. L. (2010). Foot-arch Characterization: A Review, a New Metric and a Comparison. *Journal of the American Podiatric Medical Association*. Vol 100(1),Jan/Feb 2010, 14-24
- Xiong, S., Goonetilleke, R.S., Witana, C. P. and Rodrigo, W. D. A. S. (2010). An indentation apparatus for evaluating discomfort and pain thresholds in conjunction with mechanical properties of foot tissue in vivo. *Journal of Rehabilitation Research & Development*. Vol 47(7), 629–642.
- Shi, N., Xu, D., Goonetilleke, R.S., Fu, K., and Song, H. (2009). Multivariate design for mass customization of consumer products. *International Journal of Operations Research*, 6(1), 10-23.
- Witana, C.P. and Goonetilleke, R. S., Au, E. Y. L., Xiong, S. and Lu, X. (2009). Footbed shapes for enhanced footwear comfort. *Ergonomics*, Vol. 52(5), May 2009, 617–628..

- Xiong, S., Goonetilleke, R.S., Zhao, J., Li, W., and Witana, C. P. (2009). Foot deformations under different load bearing conditions and their relationships to stature and body weight. *Anthropological Science*, Vol. 117 (2), 77-88.
- Goonetilleke, R. S. and Hoffmann, E. R. (2009). Hand-Skin Temperature and Tracking Performance. *International Journal of Industrial Ergonomics*, Vol 39(4), 577-648.
- Goonetilleke, R. S., Hoffmann, E. R., and Lau, W. C. (2009). Pistol shooting accuracy as dependent on experience, eyes being opened and available viewing time. *Applied Ergonomics* 40(3), 500-508.
- Witana, C.P. and Goonetilleke, R. S., Xiong, S. and Au, E. Y. L. (2009). Effects of surface characteristics on the plantar shape of feet and subjects' perceived sensations. *Applied Ergonomics*, 40(2), 267– 279.
- Goonetilleke, R. S., Hoffmann, E. R., and Luximon, A. (2009). Effects of Pen Design on Drawing and Writing Performance. *Applied Ergonomics*, 40(2), 292– 301.
- Xiong, S. and Goonetilleke, R. S. (2008). Modeling foot height and foot shape related dimensions. *Ergonomics*, Volume 51(8),1272-1289.
- Zhao, J., Xiong, S., Bu, Y. and Goonetilleke, R.S. (2008). Computerized girth determination for custom footwear manufacture *Computers and Industrial Engineering*, 54(3). April, 359-373.
- Ding, Y., Zhao, J., Goonetilleke, R. S., Rao, L., Yao, A., Long, C. (2007). Partial Surface Reconstruction and Applications from Point Cloud Using RBF. *Journal of Computational Information Systems* Vol. 3(6), 2479-2485.
- Au, Y. L. and Goonetilleke, R. S. (2007). A qualitative study on the comfort and fit of ladies' dress shoes. *Applied Ergonomics*, Volume 38(6), 687-696.
- Witana, C.P., Xiong, S., Zhao, J. and Goonetilleke, R. S. (2006). Foot measurements from three-dimensional scans: A comparison and evaluation of different methods. *International Journal of Industrial Ergonomics*, September, Vol. 36(9), pp. 789-807.
- Li, Y., Chen, L., and Goonetilleke, R. S. (2006). A heuristic-based approach to optimize keyboard design for single-finger keying applications. *International Journal of Industrial Ergonomics*, 36(8), 695-704.
- Luximon, A., and Goonetilleke, R. S. and Zhang, M. (2005). 3D foot shape generation from 2D information. *Ergonomics* 48(6), 625-641.
- Zhang, Y., Goonetilleke, R.S., Plocher, T., and Liang, S.F.M. (2005). Time-related behaviour in multitasking situations. *International Journal of Human-Computer Studies* 62, 425-455.
- Witana, C. P., Goonetilleke, R. S. and Feng Jiejian. (2004). Dimensional differences for evaluating the quality of footwear fit. *Ergonomics* 47(12), 1301-1317.
- Cabrera, J., Tsui, K.-L., and Goonetilleke, R. S. (2004). A Scale Model for Fitting Object Shape from Fixed Location Data. *IIE Transactions*, November 2004, vol. 36, no. 11, pp. 1099-1105
- Luximon, A., and Goonetilleke, R. S. (2004). Foot Shape Modelling. *Human Factors*, 46(2), 304-315.
- Luximon, A., Goonetilleke, R. S., and Tsui, K.-L. (2003). Foot landmarking for footwear customization. *Ergonomics* 46(4), 364-383.
- Lau, W. C., Goonetilleke, R. S., and Shih, H. M. (2002). Visual search strategies and eye movements when searching Chinese character screens. *International Journal of Human-Computer Studies*. Vol. 57(6), December 2002, pp. 447-468.
- Lee, N.K.S., Goonetilleke, R. S., Cheung, Y. S., and So, G. M. Y. (2001). MEMS Pressure Sensor Packaging Technology for Biomechanical Applications. *Microsystem Technologies*, 7(2), 55-62.



- Luximon, A. and Goonetilleke, R. S. (2001). A Simplified Subjective Workload Assessment Technique. *Ergonomics*, 44(3), 229-243.
- Goonetilleke, R. S., Shih, H. M., Hung Kai On, and Fristch, J. (2001). Effects of training and representational characteristics in icon design. *International Journal of Human-Computer Studies*. 55(5), 741-760.
- Goonetilleke R. S. and Feizhou, S. (2001). A methodology to determine the optimum seat depth. *International Journal of Industrial Ergonomics Vol 27*, pp. 207-217.
- Goonetilleke, R. S. and Luximon, A. (1999). Foot flare and Foot axis. *Human Factors*, 41(4), 596-607.
- So, R. H. Y., Chung, Germen K. M., and Goonetilleke, R. S. (1999). Target-directed head movements in a head-coupled virtual environment: predicting the effects of lags using Fitts' law. *Human Factors*, 41(3), 474-486.
- Goonetilleke, R. S., Shih, H. M. and Sze, Y. Y. (1999). Memory span: The effect of calculation method and presentation mode. *International Journal of Cognitive Ergonomics*, 3(4), 271-287.
- Goonetilleke, R. S. (1999). Legality of Bowling Actions in Cricket. *Ergonomics*, 42(10), pp. 1386- 1397.
- Goonetilleke, R. S. and Rao, B. G. (1999). Forward Sloping Chair Effects on Spinal Shape in the Hong Kong and Indian Populations. *International Journal of Industrial Ergonomics*. 23, pp. 9-21.
- Goonetilleke, R. S. (1999). Footwear Cushioning: Relating Objective and Subjective Measurements. *Human Factors*, 41(2), 241-256.
- Shih, H. M. and Goonetilleke, R. S. (1998). Effectiveness of Menu Orientation in Chinese. *Human Factors*, 40(4), 569-576.
- Goonetilleke, R. S. (1998). Designing to Minimize Discomfort. *Ergonomics in Design*, July, 12-19
- Goonetilleke, R. S., Ho Cheuk Fan, and So, R. H. Y. (1997). Foot Sizing Beyond the 2-D Brannock Method. *Annual Journal of Hong Kong Institute of Industrial Engineers (HK)* December 1997, pp. 28-31.
- Goonetilleke, R. S. and Drury, C. G. (1989). Human Optimization with Moving Optima. *Ergonomics*, 32(10), Oct. 1989, pp. 1207-1226.
- Goonetilleke, R. S., Strahle, W. C., and Lekoudis, S. G. (1986). Nonisentropic Propagation of Sound in Uniform Ducts using Euler Equations. *American Institute of Aeronautics and Astronautics*, July 1986, pp. 1088-1094.

## A2. Edited Books and Proceedings

- Advances in Physical Ergonomics and Human Factors (2019). Editors: Ravindra S. Goonetilleke and Waldemar Karwowski. Springer. ISBN: 978-3-030-20141-8
- Advances in Physical Ergonomics and Human Factors (2018). Editors: Ravindra S. Goonetilleke and Waldemar Karwowski. Springer. ISBN: 978-3-319-94483-8
- Advances in Physical Ergonomics and Human Factors (2017). Editors: Ravindra S. Goonetilleke and Waldemar Karwowski. Springer. ISBN: 978-3-319-60824-2
- Advances in Physical Ergonomics and Human Factors (2016). Editors: Ravindra S. Goonetilleke and Waldemar Karwowski. Springer.
- Science of Footwear (2012). Editor: R. S. Goonetilleke CRC Press.
- Manufacturing Agility and Hybrid Automation – II Editors: W. Karwowski and R. S. Goonetilleke.
- ERGON-AXIA. Editors: Ram Bishu, W. Karwowski and R. S. Goonetilleke

### A3. Chapters in Books:

- Goonetilleke, R. S. and Au, Y. L. (2019). Enhancing the Life of the Elderly -An Application of Design Thinking. In: R. S. Goonetilleke and W. Karwowski (Eds.): *Advances in Physical Ergonomics and Human Factors*, pp. 388–396, Springer July 2019. [https://doi.org/10.1007/978-3-030-20142-5\\_39](https://doi.org/10.1007/978-3-030-20142-5_39)
- Ameersing, L. and Goonetilleke, R. S. (2019). Foot size and foot shape of children, adults and elderly. In *Digital Human Modeling and Posturography*. Ed. Sofia Scataglini Gunther Paul. Elsevier.
- Goonetilleke, R. S. and Au, Y-L. (2019). Enhancing the life of the elderly: An application of design thinking. In: *Advances in Physical Ergonomics and Human Factors*. Eds. Ravindra S. Goonetilleke and Waldemar Karwowski. Springer. 388-396.
- Xiong, S., Rodrigo, W. D. A. S., Goonetilleke, R. S. (2012). Footwear characteristics and related empirical models. In: *Science of Footwear*. Ed. R. S. Goonetilleke. CRC Press. 47-78.
- Au, Y. L. and Goonetilleke, R. S. (2012). *Capturing footwear needs for delighting customers*. In: *Science of Footwear*. Ed. R. S. Goonetilleke. CRC Press. 177-192
- Goonetilleke, R. S. and Weerasinghe, T. W. (2012). *Footbed Design*. In: *Science of Footwear*. Ed. R. S. Goonetilleke. CRC Press. 279-290.
- Zhao, J., Ding, Y., Goonetilleke, R. S. (2012). 3D Data Processing Techniques. In: *Science of Footwear*. Ed. R. S. Goonetilleke. CRC Press. 147-176.
- Goonetilleke, R. S., Witana, C. P. and Xiong, S. (2011). *Science of Footwear Design*. In: *Human Factors and Ergonomics in Consumer Product Design: Methods and Techniques*. Eds: Marcelo Soares and Waldemar Karwowski. Taylor and Francis, Chapter 23.
- Luximon, A. and Goonetilleke, R. S. (2008). Footwear Development and Foot Modeling. In: *Handbook of Digital Human Modeling*. Ed. V. Duffy. Taylor and Francis.
- Luximon, A., Goonetilleke, R. S., and Tsui, K.-L. (2003). Footwear Fit Categorization. In: *The Customer Centric Enterprise. Advances in Mass Customization and Personalization*. Eds. Mitchell Tseng and Frank Piller. Springer Verlag pp. 491-499.
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## B. Patents

Feedback System for Load Bearing Surfaces. Inventors: C. M. Gross, J. Banaag, R. Goonetilleke, and C. Nair.

European Patent No. 91119825.7

U.S. Patent Number 5,170,364; Date: December 8, 1992

U.S. Patent Number 5, 283,735; Date: February 1, 1994

Canadian Patent CA 2056176 (Filed: Nov. 26, 1991; Issued: Feb. 22, 2005)

Human Inspection Device Based on Stereoscopy (US Patent Number 6,381,355 B1; Date: Apr 30 2002). Inventor: R. S. Goonetilleke. Licensed by Rand D Corp, HKUST (TTC/061) in June 2005.

Method and Apparatus for determining comfortable footbed shapes. Inventors: R. S. Goonetilleke and C. P. Witana. US Patent No. 7,685,728 B2, 30 March 2010. Chinese Patent for Invention No. ZL 2008 1 0091852.0 (CN 101273808 B) (Granted May 22, 2013)

Customised shoe and insole, method and apparatus for determining shape of a foot and for making a shoe or insole. Inventors: R. S. Goonetilleke, C. P. Witana and T. W. Weerasinghe US Patent No. 7,854,071 B2 Dec 21 2010

Method and Apparatus for determining flare on foot and shoe-last. (US Patent Number 7,975,390 B2 Date: Jul 12 2011). Inventors: R. S. Goonetilleke and Channa Witana. Chinese patent Invention No: ZL 2009 1 0006567.9 (CN 101513292 B) (Granted 22 May 2013).

Method and system for foot shape generation from digital images. Inventors: R. S. Goonetilleke and Yin Kwong Tang. US Provisional Patent No. 60/959,423 (TTC.PA.0342) filed July 16 2007. Chinese Patent for Invention No. ZL 200810131533.8. (filed 16 July 2008, granted 6 Feb 2013)

Method and system for foot shape generation. Inventors: R. S. Goonetilleke and Yin Kwong Tang and Yim Lee Au. Hong Kong Patent: HK 1125004 (16 July 2008)

Infrared Heat Radiation Attenuation Vest. Inventors: Uwe Reischl and R. S. Goonetilleke. Filed 2011

## V. SERVICE ACTIVITY

### University and Local Community

- Member, University Appointments and Substantiation Committee (1 Nov 2019 - 31 Oct 2022)
- Chair, Committee for recommendations of Titles of Assistant/Associate Professors of Education (2019-2022).
- Member, Engineering Review Committee for Teaching Equipment (Sept 2019 – Aug 2020)
- Member, Design Division Task Force (June 2018-present)
- Affiliate, Interdisciplinary Program Office, HKUST (July 2016 – present)
- Affiliate, Biomedical Engineering Program, Hong Kong University of Science and Technology
- Member, University Committee for Recommendations on Titles of Assistant/Associate Professors of Education. (Sept 2018-Aug 2020)
- Member, Entrepreneurship Education Program Committee in CEI. (1 Sept 2016 – 30 June 2019)
- Member of the IPO Program-level Merit Salary Review Committee (1 Sep 2016 – 31 Aug 2018)
- Selection Committee Member, “Exploring Mainland Toy Market for Hong Kong Toy Industry through Design, Upgrade and Branding”, Federation of Hong Kong Industries. (Dec 2013-April 2014).
- Senate Committee Member. (1 January 2012- 31 Dec 2015)
- Member, IELM Department Substantiation and Promotion Committee. May 2010- Aug 2017
- Member, Engineering Enterprise Management (EEMT) Program, HKUST. (April 2012 – April 2016)
- Graduate Program Committee member, Dept. Industrial Engineering and Logistics Management (IELM), HKUST. (January '95 to 2018).
- IEEM, HKUST Self-Financed Program Administrative Committee Member (2004-2018)
- Department Head Search Committee member, September 2006.
- Member, Hong Kong University of Science & Technology Teaching Peer Review Panel (2004-2015).
- Member of Committee that designed Ph.D. qualifying exam in 1994

### International Community

- Program Co-Chair, 1<sup>st</sup> International Conference on Creativity, Innovation and Entrepreneurship, Applied Human Factors and Ergonomics (AHFE), 16-20 July 2020, San Diego.
- Program Co-Chair, 11<sup>th</sup> International Conference on Physical Ergonomics and Human Factors, Applied Human Factors and Ergonomics (AHFE), 16-20 July 2020, San Diego.
- Program Chair, 10<sup>th</sup> International Conference on Physical Ergonomics and Human Factors, Applied Human Factors and Ergonomics (AHFE), 24-28 July 2019, Washington DC.
- Program Chair, 9<sup>th</sup> International Conference on Physical Ergonomics and Human Factors, Applied Human Factors and Ergonomics (AHFE), 21-25 July 2018, Orlando.
- Program Chair, 8<sup>th</sup> International Conference on Physical Ergonomics and Human Factors, Applied Human Factors and Ergonomics (AHFE), 17-21 July 2017, Los Angeles.

Program Chair, 7<sup>th</sup> International Conference on Physical Ergonomics and Human Factors, Applied Human Factors and Ergonomics (AHFE), 28-31 July 2016, Orlando, Florida.

Program Chair, 6<sup>th</sup> International Conference on Physical Ergonomics and Human Factors, Applied Human Factors and Ergonomics (AHFE), 26-30 July 2015, Las Vegas

Chair, SEANES 2015 workshop Bangkok, Thailand, 19-22 May 2015.

Technical Program Committee Chair. The 2nd International Conference on Mechatronics and Applied Mechanics, Dec 6-7 2012. Hong Kong.

Co-Chair, Sixth International Conference on Human Aspects of Advanced Manufacturing: Agility and Hybrid Automation (HAAMAHA) held at HKUST on July 5-8, 1998

Co-Chair, First World Congress on Ergonomics for Global Quality and Productivity (ERGON-AXIA) held at HKUST on July 8-11, 1998

Thesis External Examiner, Nanyang Technological University, City University of Hong Kong, Hong Kong Polytechnic University, Indian Institute of Technology (IIT), Universiti Malaysia Sarawak.

Advisor, International Advisory Panel, Institute of Design and Ergonomics Applications, Universiti Malaysia Sarawak, Malaysia. 1997-2003.

Reviewer for the Journals of Ergonomics, International Journal of Industrial Ergonomics, Applied Ergonomics, Theoretical Issues in Ergonomics Science, IIE Transactions, Human Factors and Ergonomics in Manufacturing, Journal of Personality and Individual Differences, Human Factors, Computer-Aided Design. Journal of Sports Medicine, Arthroscopy, Rehabilitation, Therapy & Technology Research, Ergonomics in Design, Journal of Foot and Ankle Research, International Journal of Human Factors and Ergonomics, Journal of Orthopaedic Surgery and Research

Membership in scientific committees of conferences (selected),

- 11th International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management, HCI 2020, 19-24 July, Copenhagen, Denmark.
- 10th International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management, HCI 2019, 26-31 July, Orlando, Florida.
- 9th International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management, HCI 2018, 15-20 July, Las Vegas
- 8th International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management, HCI 2017, 9-14 July, Vancouver, Canada
- 7th International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management, HCI 2016, 17-22 July, Vancouver, Canada.
- International Advisory Board, 13<sup>th</sup> International Ergonomics Conference – Humanizing Work and Work Environment 2015 (HWWE 2015). 6-9 December 2015 Mumbai India.
- International Scientific Committee of the second Human Factors and Ergonomics Society of Malaysia (HFEM) Annual Meeting & 2nd South Asian Network of Ergonomic Societies (SEANES ) Conference. 9-12 July 2012, Langkawi, Malaysia.
- Board for Physical Ergonomics and Safety, Applied Digital Human Modelling at the International Conference on Applied Human Factors and Ergonomics 2012.
- Scientific Advisory Board of the 3rd International Conference on Digital Human Modeling (ICDHM '11), HCI International 2011
- Publicity Chair, IEEE International Conference on Industrial Engineering and Engineering Management (IEEM), 8-11 Dec 2009, Hong Kong.
- International Scientific Committee, International Ergonomics Association (IEA) Congress 2009

- Scientific Advisory Board of the 2nd International Conference on Digital Human Modeling (ICDHM '09), HCI International 2009
- Technical Board for Physical Ergonomics at the International Conference on Applied Human Factors and Ergonomics (AHFE) 2008
- International Scientific Board of the International Conference on Agriculture Ergonomics in Developing Countries, 26-29 November 2007, Kuala Lumpur, Malaysia
- International Program Committee of the IEA World Congress 2006, 10-14 July 2006, Maastricht, The Netherlands
- Far East Liaison, International Conference on Information and Automation (ICIA2006), 15-17 Dec, 2006, Sri Lanka.
- Technical Program Committee, BME 2006 Biomedical Engineering Conference, 21-23 September 2006. Hong Kong
- International Program Committee, 11th International Conference on Industrial Engineering and Engineering Management Conference in Shenyang, China, April 23-25, 2005
- International Scientific Board of the 7<sup>th</sup> International Conference on Work with Computing Systems, June 29- July 2, 2004, Kuala Lumpur, Malaysia
- International Advisory Board, International Conference on Affective Human Factors Design, 27-29 June 2001, Singapore.
- International Scientific Advisory Committee, Fifth SEAES Conference ASEAN Ergonomics, 6-8 November 1997, Kuala Lumpur, Malaysia.
- International Advisory Committee - 4th Pan Pacific Conference on Occupational Ergonomics, Taipei, Taiwan Nov 11-13 1996.

Professional outreach/Consulting (1988 to present) – Major clients

- MTR Corporation, Hong Kong
- Kowloon-Canton Railway
- Hong Kong Telecom
- Icon MediaLab (Asia)
- Yonex footwear, Singapore
- Sprandi International
- Honeywell, Inc, US
- Motorola Design Group, NY
- Exxon-Mobil Corporation, Houston
- Ford Stamping Plant, Buffalo, NY
- Motorola, Inc., Arcade, NY
- MRC-SKF Aerospace, Inc., Jamestown, NY
- Procter and Gamble, Ohio
- General Motors, US
- Thomson Consumer Electronics, US
- MicroComputer Accessories, US
- Dow Corning, US
- International Flavors and Fragrances, US
- Cooper Power Tools, US
- Steelcase, Inc., Michigan
- Lear Seating Corporation, Michigan
- Board of Control for Cricket in Sri Lanka to solve the chucking controversy with an International Cricketer.