

Name <W.D.G.Lanarolle>

Department of Textile and Apparel Engineering

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CAREER HISTORY

- Industry Career <Optional> / Duration- 1 year -As a consultant to MAS Holdings (Nike Modernization Centre)
- Instructor / Department. University / Duration-8 months
 - Lecturer (on Contract): -
 - Lecturer (Probationary): 5 years and three months
 - Senior Lecturer Grade II: 6 years
 - Senior Lecturer Grade I: 14 years
 - Associate Professor: -
 - Professor: 5 years
 - Senior Professor: -

TEACHING & ADMINISTRATIVE ACTIVITIES

Teaching

1. Modules / Duration

TE 2030 _ Knitting Technology- 3 Credits

TE3030 – Circular Knitting – 3 Credits

TE4250 – Warp Knitting and Structures – 2 Credits

TE4310 – Flat Knitting & Integrated Designing – 2 Credits

TE 4180 -Lean Manufacturing – 3 Credits

TE3200 - Comprehensive Design Project (Textiles)

Administrative Positions <Inside the university>

1. University Coordinator for ADB equipment Grant to University of Moratuwa
 2. University Coordinator for ADB Solar Grant to University of Moratuwa
 3. Director International of the University of Moratuwa
 4. Chairman of Board of Surveys of the main stores of the University
 5. Procurement member for the building project for the Faculty of Medicine
 6. Leader of the project team for the building project to the Department of Materials Science
 7. Project Manager of the project monitoring team to the building project to the Department of Textile & Apparel Engineering
 8. Director of the Operational Technical Secretariat for the World Bank Project
 9. Project Coordinator for the QIG grant to the Department of Textile & Apparel Engineering
 10. Chairman of the Exhibition Committee of the Faculty of Engineering
 11. Chairman of the Orientation Committee
 12. Head of Department of the Department of Textile & Apparel Engineering
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RESEARCH ACTIVITIES

Research Interests

Key Research Areas <not the research topic>

- Developing functional knitted Textiles
 - Process Improvement/ Lean in Apparel Manufacturing
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EDUCATION & PROFESSIONAL AFFILIATIONS

Education

- BSc in Textile & Clothing / University of Moratuwa / 1995
- PhD in Textile/knitting / University of Manchester (UMIST)/ 2000

Professional Affiliations

Currently not affiliated

I was a member of the TI, UK

I was a member of Institute of Engineers, Sri Lanka

CAREER

Positions Held <Outside the university>

1. Sectoral Committee member – Textile and Garments of Sri Lanka Standards Institute
2. Chairman of working committees for following new standards
 - a. Stretch Bandages
 - b. Mosquito net
 - c. Men's Socks
3. Technical Expert in lab accreditation by Sri Lanka Accreditation Board

Other Involvements <Professional Contribution to the Nation>

1. Members of the Technical Evaluation Committee for school Uniforms
2. Members of the Technical Evaluation Committee for Employee Trust Fund
3. Member of lab accreditation team to evaluate the textile testing labs in Sri Lanka – Serve as Technical Expert

HONORS & AWARDS <Inside and Outside>

Presidential Award for a patent on multi-layer fabric manufacturing (selected to award in 2025)

<https://slic.gov.lk/pa-winners-2021-2022/>

Best Paper Award at the Textile Engineering Research Symposium, 3rd Annual research symposium, Department of Textile & Apparel Engineering, University of Moratuwa, 2025.

PUBLICATIONS & PATENTS

Book Chapters

Journals

K.A.P. Wijesinghe, Roshan Jayathilakage, Chamila Gunasekara, David W. Law, Gamini Lanarolle, Hidallana-Gamage H.D., Lijing Wang, 2025, Acoustic modelling of textile fibre reinforced mortars and their sound absorption performance. *Journal of Building Engineering*, Volume 115, 114546.

K.A.P. Wijesinghe, Gamini Lanarolle, Chamila Gunasekara, H.D. Hidallana-Gamage, David W. Law, Lijing Wang, Nayanatara Gamage, H.M.B.I. Gunathilaka, 2025, Thermal insulation and acoustic absorption performance of textile fibre-reinforced cement mortars, *Journal of Building Engineering*, Volume 111, 113128

D.G. Dassanayaka a, R.L. Bulathsinghala b, B.T.R. Bulathsinghala a, G. Lanarolle a, N. D. Wanasekara a, R.D.I.G. Dharmasena, 2024, Optimising fundamental knitting parameters for wearable triboelectric nanogenerators, *Nano Energy* 126 (2024) 109688

Seram, N., Nanayakkara, J. and Lanarolle, G., 2020, Significance of Suppliers' Operational Capabilities on The Front-End Decision Making in Apparel Innovation, *Clothing and Textiles Research Journal*.

Jayawardena, W.A.M., Lanarolle, G., 2020, A Review on Novel Approaches to Enhance Sound Absorbing Performance Using Textile Fibers, *The Journal of The Textile Institute*.

Lanarolle, G., 2021, Geometry of Compact Plain Knitted Fabrics, *Research Journal of Textile and Apparel*. Volume 25, Issue 4. <https://doi.org/10.1108/RJTA-10-2019-0048>

Perera A.A.E. and Lanarolle, W.D.G., 2020, Comparative study on the thermal shrinkage behavior of polyester yarn and its plain knitted fabrics, *The Journal of The Textile Institute*, DOI: [10.1080/00405000.2020.1729650](https://doi.org/10.1080/00405000.2020.1729650).

Perera,H.A. A. E. and Lanarolle, G., 2020, Thermal behavior of heat treated polyester knitted fabrics 2020, *Research Journal of Textile and Apparel*..

Perera, H.A.A.E., Lanarolle, G. ,andJayasundara, R., 2019, Effects of Panel Parameters and Heat Setting Temperature on Thermal Shrinkage of Heat Cured Polyester Plain Knitted Fabric Panels Statistical Modeling Approach, *IEEE Xplorer (MERCon)*, pp.722-726. DOI: [10.1109/MERCon.2019.8818868](https://doi.org/10.1109/MERCon.2019.8818868)

Seram, N., Nanayakkara, J. and Lanarolle, G., 2019, Organization's core competencies and front-end decision-making in the apparel innovation, *Research Journal of Textile and Apparel*, Vol. 23 No. 4, pp. 355-370. DOI:[10.1108/RJTA-03-2019-0010](https://doi.org/10.1108/RJTA-03-2019-0010)

Seram, N., Nanayakkara, J. and Lanarolle, G., 2019, Decision making in the front –end of Apparel Innovation: A Study from Sri Lanka, *Fashion Practice: The Journal of Design, Creative Process and the Fashion Industry*, Vol, 11, Issue 2, pp. 151-174.

Seram, N., Nanayakkara, J. and Lanarolle, G., 2016, Apparel Product Development-An overview of existing models, *International Journal of Product Development*, Vol. 21, Nos 5-6, pp 331-350.

Niles, S. N., Fernando, E.A.S.K., and Lanarolle, W.D.G., 2015, A system for analysis, categorization and grading of fabric defects using computer vision, *Research Journal of Textile & Apparel*, Vol.19, No.1, pp. 59-74.

Lanarolle, G. andRatnayake, V., 2014, Cellular Manufacturing and Teamwork Concepts in Garment Manufacturing,*IOSR Journal of Business and Management*, e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 16, Issue 6. Ver. III , pp. 81-93, www.iosrjournals.org.

Ratnayake, V., Lanarolle, G., Chandana, P., G. and Marsh, J., 2009, Cellular manufacturing model to reduce WIP fluctuation in garment manufacturing, *International Journal of Six Sigma and Competitive Advantage*, Vol. 5, No.4 pp. 340 - 358.

Dias, T., Lanarolle, G., Porat, I. 2002, Automated stitch length adjusting system for multi-feeder circular knitting machines, *Mechatronics Special Issue*, Vol.12, No.9-10.

Dias, T. and Lanarolle, G., 2002, Stitch length variations in circular knitting machines due to yarn winding tension variations in the storage feed wheel, *Textile Research Journal*, Vol.72, No.11, pp 997-1001. DOI: [10.1177/004051750207201111](https://doi.org/10.1177/004051750207201111)

Dias, T., Chien-Fa, T, Lanarolle, G., 1999, Digital drive system for stitch length control in circular knitting, *Proceedings of Mechatronics Special Issue*, Vol.9, No.7.

Lanarolle W.D.G, Jeewandara V.K., Amadoru R.S., Wijayarathna E.K.B. and Randike H.M., 2017, Size Chart for Socks for School Boys in Sri Lanka, *International Journal of Engineering Sciences & Research Technology*, Vol. 6 , Issue 2, pp 488-493.DOI: [10.5281/zenodo.293747](https://doi.org/10.5281/zenodo.293747)

Lanarolle, W.D.G., Weerasooriya, W.M.N, Madushika, K.S.M and Tharsan G, 2017, Effects of Tension Variations of Individual Yarns on Quality of warp knitted fabrics. *International Journal of Engineering Sciences & Research Technology*, Vol. 6 , Issue 7, pp 40-45.DOI: [10.5281/zenodo.822956](https://doi.org/10.5281/zenodo.822956)

Seram, N., Nanayakkara, J. and Lanarolle, G., 2017, Supplier Involvement in Apparel Innovation-How it Works, *International Journal of Scientific Research and Innovative Technology*, Vol. 4 No. 4, pp 122-132.

Conferences/Symposium

R. Nanthini, J. Shajanusha, S.B. Silva W.D.G. Lanarolle, S.N.Niles, Analysis of Correlation between Stretch and Recovery Properties of single jersey fabrics and elongation characteristics of Elastane yarns, Textile Engineering Research Symposium, 3rd Annual research symposium 2025, Department of Textile & Apparel Engineering, University of Moratuwa.

J.W.A. Madushikaa, W.D.G. Lanarolleb, J.K. Wijerathna, The Effect of Stitch Length on Sound Absorption Behaviour of Cone Knitted Structures, 22nd Academic Sessions 2025, University of Ruhuna

J.W. A. Madushika, j. K. Wijerathne, w. D. G. Lanarolle, Development of a small-scale reverberation Chamber and validation of the diffuse field, *Proceedings of the 11th YSF Symposium, Sri Lanka – 2023*

Chamika Madurangi, Charuka Wijethunge, Gamini Lanarolle, An Investigation of the Auxetic Behavior of Weft Knitted Fabrics, Poster Presentation, *TERS Conference, University of Moratuwa, 2023*.

Chamika Madurangi, Charuka Wijethunge, Gamini Lanarolle, Influence of repeat unit size on Auxetic effect of foldable weft knitted fabrics. *IEEE MerCon, University of Moratuwa, 2022*.

Perera, H.A.A.E., Lanarolle, G., 2019, Significance of thermal shrinkage of heat-set polyester plain knitted fabric panels subjected to different thermal base processes, Poster Presentation, 91st Textile Institute World Conference, UK.

Seram, N., Nanayakkara, N. and Lanarolle, G. 2015, Product Innovation for Customers: A study of Innovation Process, International Conference On Apparel, Textiles and Fashion Designing, Sri Lanka.

Lanarolle, G., Perera, T. and Yapa, T.S.D., 2014, Performance Improvement Best Practices Applicable to the Sri Lankan Apparel Industry, International Conference on Business Management, pp 209-216.

Nandasiri, H.M.A.G.K. and Lanarolle, G., 2013, Mathematical Representation of Thermal Insulating Behavior of Flock Printed Fabrics, Annual Session 2013, Institute of Engineers Sri Lanka, pp.419-426.

Yapa, T.S.D., Lanarolle, W.D.G. and Perera, T. 2011, Introducing Process Orientation to the Sri Lankan Apparel Industry. 17th ERU Symposium, University of Moratuwa, pp. 158-161.

Lanarolle W.D.G., Perera, T. and Yapa, T.S.D., 2014, Performance improvement best practices applicable to the Sri Lankan Apparel Industry, 3rd International Conference on Management and Economics, University of Ruhuna, Sri Lanka.

Ratnayake, V., Lanarolle, G., Marsh, J., Farmer, M., 2010, Development and Implementation of Lean Set-up Reduction Methodologies in Garment Manufacturing Lines, Second European Research Conference in Continuous Improvement and Lean Six Sigma, Glasgow.

Marsh, J, Perrera, T., Ratnayake, V., and Lanarolle, G. 2008, Development of a 5S Sustainability Model for use with Lean and/or Six Sigma projects, Third International Conference on Six Sigma, Scotland.

Lanarolle, G., Ratnayake, V., Silva, N, Perera, T., 2007, The simulation of a novel manufacturing cell for garment fabrication, 85th World Conference of Textile Institute, Sri Lanka.

Ratnayake, V., Lanarolle, G. Perera, C., 2007, Value stream mapping as a decision making tool for applying lean techniques in the garment industry, Proceedings of the 85th World Textile Conference, Sri Lanka. pp. 123-130.

Lanarolle, G., Dias, T., Porat, I. (2002), Theoretical analysis into the yarn demand rate fluctuation and the run-in yarn tension fluctuation in knitting, Proceedings of the World Congress – Knitting for the 21st Century’, Manchester, UK.

Dias, T., Lanarolle, G., 2001., Digital stitch length Controller, Proceedings of the 6th Asian Textile Conference, Hong Kong.

Patents

1. Patent No: 20801 – NIPO

Topic – Mechanism to produce multi-layer solid weft- knitted structures – 2022

OTHER

-keynote speeches / plenary speech / panelist / moderator

-Resource person – workshops and seminars of conferences & CPD

-No of postgraduate supervision

Speech on ‘Lean Philosophy’ –delivered at Institute of Engineers Sri Lanka (IESL)
