

Veerakumar Arumugam, Ph.D.

Scientist – Textile Materials

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Dr. Veerakumar Arumugam is currently Scientist - Textile Materials for Sports Applications at the Nanyang Technological University, Singapore. He earned his Bachelor and Master in Textile Technology at Anna University, Chennai, India, in 2008 & 2011 and his PhD in Textile Technics and Materials Engineering from the Technical University of Liberec, Czech Republic in 2017. In his thesis work he pioneered the 3D knitted fabrics for multifunctional applications.

After completing his PhD, Veerakumar accepted a position as scientific researcher at Faculty of Textile, Technical University of Liberec, Czech Republic, where he worked for a short period. During that time, he developed sound absorptive non-woven carpets for automotive using hollow fibres from renewable resources for Silon s.r.o. During this time, he also performed scientific studies related to three-dimensional fabrics and nonwoven textile materials for functional applications with advanced properties such as thermal protection, excellent compression recovery, impact tolerance and good acoustic performance.

In February 2019, Veerakumar accepted a Scientist-Textile Materials position at the Joint Innovation Center, School of Materials Science and Engineering, Nanyang Technological University, Singapore, where he has been since that time. While at Nanyang, Veerakumar has been involved in projects related to knitted, woven and non-woven fabrics for sport apparels, footwear and equipment. In particular, Veerakumar's work mainly focusing on middle layer thermal insulative materials for winter jackets which includes thin and fluffy, elastic and molded nonwovens, artificial down and functional fiber balls and paddings, hybrid and sustainable fabric membrane through unconventional process, functional and thermally protected lining and shell fabrics, radiative and evaporative cooling apparels, fabrics with negative poisson's ratio (NPR), smell absorption and antibacterial fabrics. He also works closely with researchers from different universities, R&D Director, brand managers, production & design department, and factories to identify new product/technology possibilities for apparel/ textile innovations driven by end-user needs.

Veerakumar has over 20 scientific papers in peer-reviewed journals, 15 monographs and 30 conferences publications.