

**Topic of the Speech:**

Some Ways to Creation of Thermal Insulation Layer

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Mrs. Mohanapriya Venkataraman is a textile material specialist. Her earlier education is from Anna University and National Institute of Fashion Technology (NIFT), India followed by doctoral studies at TU Liberec. All are renowned institutes of academic excellence. Post her studies, she handled Quality assurance at Intimate Fashions, India which was the production center for Victoria's Secret lingerie. She was one of the selected "Limited Brand" certified technologists across the globe. As a six sigma green belt and ISO certified internal auditor, she brought about considerable improvements to Quality Assurance processes.

Currently, she is working at Faculty of Textile Engineering, Technical University of Liberec undertaking research projects on thermal behavior of aerogel based materials; Heat transfer phenomena in fibrous structures and Comfort of protective fabrics at extreme temperature conditions. She has worked closely KANSEI Engineering, Shinshu University, Japan; Material engineering department at Indian Institute of Technology, India and Polymer division of Central Leather Research Institute, India. She has published several research papers and has also presented lectures at conferences in many countries. She is married and has two sons. She loves travelling and passionate about empowerment of women.

Some Ways to Creation of Thermal Insulation Layer

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ABSTRACT (NO MORE THAN 500 WORDS:)

There exist a lot of approaches how to calculate thermal insulation expressed by clo of clothing for assuring comfort for selected climatic conditions (temperature, wind speed, altitude) and human activities. For design purposes there are three main steps how to select textile layer composition and thickness.

1. Selection of suitable fiber type
2. Fabric construction
3. Required thickness

In this study the tuning of thickness by creation of nonwoven layer or multilayers and utilization of IR heat produced by human body by back reflection surface will be proposed and used. The sandwich structures containing thermal insulation layer will be compared.