

AVONI GHARDE

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EDUCATION

Ph.D. Textile Technology Management and Fiber Polymer Science

Expected Graduation: Spring 2020

North Carolina State University, Raleigh, NC

GPA 3.90/4.00

- Dissertation: Carpet Recycled Polymers - Characterization, Fiber Formation and Applications

B. Tech Fibres and Textiles Processing Technology

August 2011 – June 2015

Institute of Chemical Technology, Mumbai (India)

CGPA 8.23/10.00

- Dissertation: Optimization and Production of Electro-Spun Silk Fibroin Nanofibres

SKILLS

- **Machines:** Keyence Microscope, Electrospinning, MTS Tensile Strength Tester, Radwag Moisture Analyzer, Air Permeability (FX 3300 LabAir IV), CERTITEST® Model 3160 Automated Filter Tester, Hanatek FT3 Precision Thickness Gauge, Instron Tensile Strength Tester, Elmendorf Tearing Strength Tester, Lyophilizer machine, Freeze dryer, FTIR.
- **Fabric Testing:** Spray Tester (water repellent test), Martindale Pilling and Abrasion tester, Spectrophotometers (whiteness index), SEM
- **Technologies:** Melt Spinning, Melt-blowing, Vat Dyeing, Yarn Dyeing, Screen Printing, Magnetic Printing, Coating and Finishing.

CERTIFICATION AND PUBLICATION

- **Graduate Certificate:** Nonwoven Science and Technology *December 2017*
- **Journal of Textile and Apparel, Technology and Management:** *November 2016*
Influence of Factors on Clothing Sales and its Future Trends - Regression Analysis and Time Series Forecast of Clothing Sales

RELATED COURSEWORK

Nonwovens Processing | Nonwovens Characterization Methods | Nonwovens Product Development | Physical Properties of Fibers and Polymers | Fiber Formation | Textile Dyeing and Printing | Evaluation of Dyes and Specialty Chemicals | Environmental Aspects of Textiles Processes | Apparel Technology Management | Global Textile and Apparel Business Dynamics

EXPERIENCE

Research Intern

May – July 2014

BASF, ATCT Lab, Mumbai (India)

- Analyzed enzyme application to reduce pilling effect.
- Completed comparative studies of softener classes and performance studies of resin finishes.

PROJECTS

Carpet Recycled Polymers: Characterization, Fiber formation, and Applications

May 2017 – Present

- Working on different characterization techniques to analyze carpet recycled Polyester and Nylon 6 pellets such as TGA, DSC, Melt Flow Index, SEM, Viscometry, and FTIR.
- Manufacturing filaments on melt-spinning and melt-blowing production lines.

Comparison Study of Nonwovens (PET, PP, PU)

March 2016 – April 2016

- Investigated Meltblown Polyester, Polypropylene, Polyurethane and Needle punched Polyester for a performance study which included air permeability, tensile strength, filtration efficiency, and porosity.

Report on Applications of Nanotechnology in Medical Textiles

July 2014 – November 2014

- Conducted an extensive literature survey on various applications in the field of medical textiles including surgery, bio-sensors, and imaging etc.
- Studied preparation processes to obtain nanoparticles.

LEADERSHIP

- **President:** Textile Association of Graduate Students (TAGS at NC State University)
- **Chair:** Teaching Effectiveness Committee (GSA at NC State University)

April 2016 – July 2017
September 2016 – July 2017

ACTIVITIES

- **Student Member:** Graduate Women in Science (GWIS)
- **Student Member:** American Association of Textile Chemists and Colorists (AATCC)
- **Student Member:** American Society for Testing and Materials (ASTM)
- **Cultural:** Indian Classical Dancer