

# AVONI GHARDE

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## EDUCATION

### **Ph.D. Textile Technology Management co-major 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:** Ultra Performance Liquid Chromatography (In-training), 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.

## CERTIFICATIONS, HONORS AND PUBLICATIONS

- **Graduate Certificate:** Nonwoven Science and Technology *December 2017*
- **NC State LEAD Awards:** Outstanding Student Organization Officer *April 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
- **Osborne Graduate Fellowship:** Winner amongst 3 honourable nominees *August 2016*

## 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 | Lean Six Sigma (upcoming)

## 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.

## WORK EXPERIENCE

### **Research Intern - BASF**

*May – July 2014*

ATCT Lab, Mumbai (India)

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

## LEADERSHIP

- **Vice President:** Materials Research Society, NC State University Chapter
- **President:** Textile Association of Graduate Students (TAGS at NC State University)
- **Chair:** Teaching Effectiveness Committee (GSA at NC State University)

*September 2018 - Present*

*April 2016 – July 2017*

*September 2016 – July 2017*

## ACTIVITIES

- **Student Member:** Graduate Women in Science (GWIS), American Association of Textile Chemists and Colorists (AATCC), American Society for Testing and Materials (ASTM), Materials Research Society (MRS)
- **Cultural:** Indian Classical Dancer - trained for more than 12 years