

ALIREZA GARMABI

Fiber and Polymer Science
Nonwovens

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📍 Raleigh, NC

Currently a PhD student in Fiber and Polymer Science at the NC State University, with a strong Polymer background. My research focuses on development of a novel method, called Digital Image Correlation (DIC) to study the Micro-Mechanics of Nonwovens Bonds, goal is to be able to predict the behavior of different bond pattern designs and modifications.

SKILLS

SolidWorks | Arduino | JMP
Electrospray | Electrospinning
DOE | DIC | XRD | FTIR
Mechanical Testing | DSC
Optical Microscopy
Microsoft Office | SEM
Rheology | OriginPro

SKILLS (Soft)

Ideation | Analytical | Input
Competition | Focus
Efficient | Energetic | Strengths
Self-Confident | Strong-Willed
Strategic Thinker | Inspiring
Stock Market | Design
Music Producer/DJ | Gamification

EDUCATION

2017-2020 Ph.D. | Fiber and Polymer Science *NC State University, Raleigh, NC*
"Micro-mechanics of Thermal Nonwoven Bonds via Micro Digital Image Correlation"
2017-2019 Nonwoven Science & Technology Certificate *Nonwovens Institute,*
2014-2016 M.S | Polymer Engineering *Amirkabir University, Tehran, Iran*
"Self-reinforcement of PLA using Melt-Electrospun PLLA/PDLA with stereocomplex
crystals"
2018-2020 B.S | Polymer Engineering *Amirkabir University, Tehran, Iran*
"An investigation of PLLA/PDLA blend crystallization"

EXPERIENCES

2014-2016 Research Assistant *NC State University, Raleigh, NC*
- Establishing "Nonwovens Micro-Scale DIC" test method for the first time.
2015-2016 - Building an automated micro-scale DIC tensile device
- Study micro mechanics of nonwoven bond points
Research Assistant *Amirkabir University, Tehran, Iran*
2019-2020 - Fabrication of PLLA/PDLA electrospun nanofibers
- Study on PLA Stereocomplex crystallization
Teaching Assistant *Amirkabir University, Tehran, Iran*
2018-2019 - Teaching "Fluid Mechanics" as a lecturer

LEADERSHIP EXPERIENCES

2017-2018 Iranian Students Association President *NC State University, Raleigh, NC*
- Planning yearly events & monthly fund-raising events with hundreds of participants
- Planning multi-cultural events & collaborating with other organizations in area
2017-2018 Graduate Student Group Co-Leader *Nonwovens Institute, Raleigh, NC*
- Lead weekly students meeting, organize student volunteers, & communicate
2014-2016 - Participate in Industrial Advisory Board meeting's planning and organization twice a
year
2017-2013 Textile Association of Graduate Students *NC State University, Raleigh, NC*
- Organized "Research Day" conference in College of Textiles as Event Coordinator
- Served on department committees & holding department's happy hour
2018-2020

Awards

2018&2019 Provost's Doctoral Fellowship *NC State University, Raleigh, NC*
2019 - Offered to a small number of outstanding entering doctoral students by Graduate School