

# Dylan Madisetti

University of South Carolina Columbia 2017

Major: **Mechanical Engineering**  
Minors: **Computer Science & Mathematics**  
GPA: **3.924**

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## Work Experience

### 2016. NASA Langley Research Center

#### **Interned Researcher (Current)**

- Developing custom DPSML simulation software (C++) to run on massively parallel super computer clusters. Benchmarking and validating novel numerical methods for meshless discretization.
- Constructing laser excitation system to create guided waves in damaged composites for non-contact NDE observation via laser vibrometry.

### 2014 - 2016. Integrated Material Assessment & Predictive Simulation Laboratory (USC)

#### **Undergraduate Researcher (Current)**

- Currently developing code for \$775,072 NASA grant "Multi-scale Computational Non-destructive Evaluation (NDE) for Composites"
- Prototyped CAD-to-pointcloud meshing procedure specific for the Distributed Point Source Method. Currently refining software under independently awarded \$3,000 SURF grant.
- Designed a cochlea inspired piezoelectric energy harvester for use at ambient frequency with funds from co-authored \$3,000 Magellan Grant.
- Worked with acousto-elastic metamaterials to investigate the use of energy harvesting from local resonance and Bragg scattering- leading to 2 publication submissions.

### 2014. CloudCollege PBC.

#### **Software Developer**

- Collaborated to build the CloudCollege product which has secured \$50,000 in seed funding.
- Expanded and improved an existing beta product into a consumer-ready release.

### 2013 - 2014. Advanced Manufacturing Research Laboratory (USC)

#### **Undergraduate Researcher**

- Fabricated test molds for new method of spin mold processing using 3D printing.
- Used circuit boards and Arduinos to create controllable environment for spin processing.
- Wrote Ruby modules for Sketchup to help with design process.

### 2013. BoomTown LLC.

#### **Software Developer**

- Full time employee with a base salary of over \$40,000 at the age of 18.
- Extended and contributed to C# API for over 600 frontend websites
- Managed front-end websites in PHP (Later Hack as we experimented with HHVM), Less and Coffeescript

### 2012 - 2013. Equiscript LLC.

#### **Software Developer**

- Wrote workflows and entire processes in Salesforce's Apex (very similar to Java)
- Worked with C#'s Linq library for detailed data processes
- Developed in SQL, and Python automated data processing procedures
- Provided elastic instance system administration on Amazon's EC2 platform, and later Rackspace.

## Publications

- **Journal of Intelligent Materials Systems and Structures:** A process to Scavenge energy at low acoustic frequencies (<KHz) with controlled geometric configurations (co-author under Dr. Ahmed, Dr. Banerjee)
- **Journal of Sound and Vibration:** Study to analyze the influence of resonator setting and matrix stiffness on stop and local resonance bands in an acoustic metamaterial (co-author under Dr. Ahmed, Dr. Banerjee) [Submitted, pending review]

## Honors

2013 - 2014. President's List (USC)  
2013 - 2016. Dean's List (USC)  
2014. Phi Beta Kappa Freshman Award  
2015. Magellan Grant Recipient  
2015. NSPE Foundation Scholarship  
2016. Tau Beta Pi Scholarship  
2016. SURF Grant Recipient

## Clubs and Activities

2015 - 2016. President of ASME at USC  
2015 - 2016. Secretary for Cybersecurity Club at USC  
2014 - 2016. Student Member of ACM  
2015 - 2016. Member of Software Engineering Club