

Gerardo Andrés Mazzei Capote

45 N. Randall Ave, Apt. 109 • Madison, WI- 53715
(608) 622-4643 • mazzeicapote@wisc.edu

OBJECTIVE

Full time employment in Mechanical or Manufacturing Engineering.
Strong interest in polymer processing and polymer-based additive manufacturing technologies.

EDUCATION

- **University of Wisconsin-Madison** - *Madison, WI, U.S.A* - ongoing
 - **PhD:** Mechanical Engineering.
 - **MSc:** Mechanical Engineering.
 - GPA: 3.813 / 4.
- **Universidad Simón Bolívar**- *Caracas, Venezuela*
 - **Bachelor of Science:** Materials Engineering.
 - GPA: 3.9375 / 5.

ENGINEERING EXPERIENCE

- Graduate Student** under Prof. Tim Osswald, UW-Madison **August 2016 - Present**
- Extruded a customized ABS filament with tight dimensional tolerances to achieve high precision volumetric output during 3D printing.
 - Used a 6-axis robotic printer to produce and test FFF coupons with unusual bead orientations.
 - Added custom geometries to "SciSlice" - an open source, research focused slicing engine.
 - Used a novel criterion to develop a failure surface for FFF parts.
 - Taught "ME370- Energy Systems Laboratory" to senior undergraduate students.
 - Manager of the Additive Manufacturing Laboratory of the Polymer Engineering Center since August 2017.

SKILLS

Languages:

- Spanish: *Native language*
- Portuguese and English: *Advanced, near-native level*

Computer skills:

- | | | |
|---------------------------------|---|--------------------------------------|
| •Solidworks - <i>Proficient</i> | •MATLAB - <i>Proficient</i> | •Rep-Rap G-code - <i>Proficient</i> |
| •EES - <i>Intermediate</i> | •Microsoft Office - <i>Intermediate</i> | •Adobe Animate - <i>Intermediate</i> |
| •Origin - <i>Intermediate</i> | •R - <i>Basic</i> | •AutoCAD - <i>Basic</i> |

OTHER EXPERIENCE

- Chemistry Tutor** Grupo Escalera, Universidad Simón Bolívar **August 2012 - August 2013**
- Taught inorganic and organic chemistry to senior high school students aiming to apply to higher education studies in a venezuelan institution.
- President** Asociación de Estudiantes de Ingeniería de Materiales- USB **September 2014- July 2015**
- Organized the event "V Convención Ingeniería de Materiales" where industry partners and experts presented on current topics related to Materials Engineering.
 - Organized multiple events aimed at obtaining sponsorships or funding for the student organization.
 - Organized industry visits where students could see manufacturing processes at work.
 - Excelled at delegating and working with a team of like-minded individuals.

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PUBLICATIONS AND PRESENTATIONS

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| SPE ANTEC | Anaheim, CA | 2017 |
| <ul style="list-style-type: none">• <i>Extrudate Mass Flow Rate Analysis in Fused Filament Fabrication (FFF): A Cursory Investigation of the Effects of Printer Parameters.</i> Co-author. | | |
| SFF 2017 | Austin, TX | 2017 |
| <ul style="list-style-type: none">• <i>Towards a Robust Production of FFF End-User Parts with Improved Tensile Properties.</i> Principal author and presenter. | | |
| SPE ANTEC | Indianapolis, IN | 2016 |
| <ul style="list-style-type: none">• <i>Optimization of the FDM™ Additive Manufacturing Process.</i> Co-author. | | |

ADDITIONAL INFORMATION

- Society of Plastics Engineers (SPE) member.
- Exchange student through the Rotary Youth Exchange Program (August 2008 to June 2009).
- Venezuelan and Italian citizenship.
- Holder of Brazilian permanent resident visa.