

# 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.

# Gerardo Andrés Mazzei Capote

Resume – page 2

## **PUBLICATIONS AND PRESENTATIONS**

---

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

## **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.

## **LINKS**

---

LinkedIn profile - <https://www.linkedin.com/in/gerardo-mazzei-capote-396413b3>