

SUMMARY OF QUALIFICATIONS

A Mechanical Engineer with a Master's degree and two years of scientific research experience, specializing in the design, analysis, implementation, and presentation of research initiatives and numerical and analytical modeling.

- **Languages:** English – fluent, Turkish – native
- **Software:** SolidWorks, Ansys Fluent CFD, MS Excel, MS PowerPoint, MS Publisher, Google Sketchup, SolTrace
- **Programming Languages:** Fortran, Matlab

EDUCATION

Master of Science (M.S.), Mechanical Engineering
San Diego State University (SDSU)**Graduated May 2013**
San Diego, CA

- **Specialization:** Energy and Thermofluids
- **GPA:** 3.77
- **Thesis:** “Optical Analysis and Modeling of a Window for Small Particle Receiver Using the Monte Carlo Ray Trace Method” (Submitted in April 2013)

Bachelor of Science (B.Sc.)**Eskisehir Osmangazi University (ESOGU)****Graduated July 2009**
Eskisehir, Turkey

- **Major:** Mechanical Engineering
- **GPA:** 3.00
- **Thesis:** “Mechanic and Metallographic Analysis of an Alloy Ti6Al4V Which is Surface Modified Using a Plasma Arc Torch” (Submitted in January 2009)

WORK EXPERIENCE

Research Specialist***Research Assistant*****SDSU, Combustion and Solar Energy Laboratory****May 2013 – Present****September 2011 – May 2013****San Diego, CA**

- Performing a trade study evaluating optical performance and material and fabrication costs for solar receiver windows in Concentrated Solar Power systems in support of a \$4 million project funded by Google Inc. and the U.S. Department of Energy.
- Simulating convective heat transfer from the receiver window to the environment using ANSYS Fluent.
- Published a 120-page Master's thesis detailing the best material options and geometries for designing a 5 MW high-temperature, small-particle solar receiver.
- Studied various parameters to demonstrate the extreme effect of different window geometries based on optical transmission and absorption characteristics.
- Developed, validated, and coupled a numerical Fortran model with two pre-existing models simulating radiation heat transfer for design of a solar receiver and window with a potential cost of up to \$300K.
- Detailed production limitations and concerns such as manufacturing and handling of a large scale window. Communicated with professors, lab partners, and suppliers through meetings, conferences calls, and e-mails.

ADDITIONAL WORK EXPERIENCE

Soldier (Mandatory Military Service)**Rize Provincial Gendarmerie Command****December 2009 – May 2010****Rize, Turkey*****Manufacturing Intern*****Dundarlar Machinery****May 2009 – June 2009****Eskisehir, Turkey*****Manufacturing and Business Intern*****Turkey Sugar Factory****January 2009 – February 2009****Eskisehir, Turkey****ASSOCIATIONS**

American Society of Mechanical Engineers (A.S.M.E.)**June 2013 – Present****PUBLICATIONS**

Mecit A. M. & Miller F., “Optical Analysis of a Window for Solar Receivers Using the Monte Carlo Ray Trace Method,” *ASME 7th International Conference on Energy Sustainability*, Minneapolis, MN, USA, July 14th -17th, 2013

Mecit A. M., Whitmore A. & Miller F., “Optical Analysis and Thermal Modeling of a Window for a Small Particle Solar Receiver,” *SolarPACES 2013*, Las Vegas, NV, USA, Sept. 17th-20th, 2013.