

# Matthew Rothfuss

<http://matthewrothfuss.me>  
 mreng@ksu.edu | (785) 260-0206

## EDUCATION

### KANSAS STATE UNIVERSITY

#### B.S. IN PHYSICS

Grad. May 2016 | Manhattan, KS  
 College of Arts and Sciences

### ABILENE HIGH SCHOOL

Grad. May 2007 | Abilene, KS

## LINKS

Github:// [Kovrinic](#)

LinkedIn:// [mrothfuss](#)

Twitter:// [@Rothfuss212](#)

## COURSEWORK

### UNDERGRADUATE

Introduction to Quantum Mechanics

(PHYS 662)

Thermodynamics And Statistical Physics

(PHYS 664)

Applied Optics And Optical

Measurements

(PHYS 652)

Introduction To Optics

(PHYS 651)

Electromagnetic Fields 1

(PHYS 532)

Mechanics

(PHYS 522)

Introduction To Complex Analysis

(MATH 630)

Topics In Physics

(Programming/Numerical Methods) (PHYS 707)

## SKILLS

### PROGRAMMING

Experienced:

LabVIEW • Python

Familiar:

Shell •  $\text{\LaTeX}$  • Matlab

JavaScript • HTML • C++

### DESIGN

Photoshop • GIMP • LibreCAD

### PLATFORMS

Linux • Windows • OS X

## EXPERIENCE

### KANSAS STATE UNIVERSITY | ASSISTANT SCIENTIST

June 2014 - May 2015 | Manhattan, KS

- Designed and created a bench-top Plate Heat Exchanger (bPHE)
- Restored a supercritical fluid extraction (SFE) system
- Development (fabrication, LabVIEW front/back end code) of an in house Ultrasonic Flaw Detector

### KANSAS STATE UNIVERSITY | RESEARCH ASSISTANT

August 2011 - May 2012 | October 2010 - May 2011 | Manhattan, KS

- Improved/updated Kansas Light Source (KLS) LabVIEW diagnostics monitoring program.
- Created a LabVIEW diagnostics monitoring program for the High Intensity Tunable Source (HITS).
- Participated in research and maintenance for the KLS & HITS laser labs.

### LAND PRIDE | ASSEMBLY LINE WORKER

May - August (2011 & 2010) | August 2008 - August 2009 | Abilene, KS

- Memorized assembly of products, optimized stations for efficiency, and worked with pneumatic tools
- Maintained a high standard for quality, and trained station workers

## RESEARCH

### KSU ANIMAL SCIENCES AND INDUSTRY | RESEARCH ASSISTANT

September 2015 - May 2016 | Manhattan, KS

Worked for **Dr. Jayendra Amamcharla** to develop LabVIEW libraries for an Olympus EPOCH LTC Flaw Detector for data collection and analysis.

### KSU JAMES R. MACDONALD LABORATORY | RESEARCH ASSISTANT

October 2010 - May 2012 | Manhattan, KS

- Worked for **Dr. Vinod Kumarappan** in KLS laser lab, updating LabVIEW diagnostics monitoring program and supported grand students **Varun Makhija** and **Xiaoming Ren** in their research.
- Worked for **Dr. Carlos Trallero** in HITS laser lab, creating a secondary LabVIEW diagnostics monitoring program and providing general lab support.
- Duties included creating small electronics, beam path maintenance, handling photo detectors, optical equipment, LabVIEW coding, data collection and analysis.

## AWARDS

- 2011 James A. Branson Memorial Scholarship
- 2007 Louis Armstrong Jazz Award
- 2007 Kansas Scholars Curriculum
- 2005 Eagle Scout

## SOCIETIES

- 2007 National Honors Society