

## PERSONAL INFORMATION

**Applicant ID:** 1000225265  
**First Name:** Dustan  
**Last Name:** Kraus  
**Previous Last Name 1:**  
**Gender:** Male  
**Race:** White  
**Disability:** No  
**Other Disability:**

**Prefix:**  
**Middle Name:**  
**Suffix:**

**Previous Last Name 2:**  
**Veteran Status:** No  
**Ethnicity:** Not Hispanic or Not Latino

### Mailing Address

**Street Address:** 359 West 100 South (Basement)  
**City:** Provo  
**Country:** United States  
**E-mail:** dustan.kraus@gmail.com

**State:** UT  
**Postal Code:**  
**Phone Number:** 2085400284

**Zip Code:** 84601

### Permanent Address

**Same as mailing address:** Y

### Date and Place of Birth

**Date of Birth:** 02/16/1991  
**Country:** United States  
**Citizenship:** US Citizen  
**If permanent resident alien, date status was granted:**

**State:** ID

### High School Location

**City:** Chesterfield  
**Country:** United States

**State:** MO

## EDUCATION AND WORK EXPERIENCE

### Education

List colleges or universities attended and your enrollment details.

									Graduate Course Information		
College/Univ.	City	State	Country	Start Date	Completion Date	Degree	Graduation Date	Primary Field of Study	Sem. Hrs.	Qtr. Hrs.	Dept.
Brigham Young University	Provo	UT	US	08/2009	04/2016	BS	04/2016	Engineering - Mechanical Engineering			
Brigham Young University	Provo	UT	US	08/2016	08/2018	MS	08/2018	Engineering - Mechanical Engineering			

### Other Experience

List teaching and work experiences relevant to your field of study since entering college/university. Experiences do not have to be limited to the academic realm.

Title	Institution/Organization	Start Date	End Date
Electromechanical Controls Intern	The Aerospace Corporation	05/2016	08/2016
Robotics Research Assistant	Brigham Young University	01/2016	
Mechanical Engineering Intern	Koch Industries	05/2016	08/2016
Design Engineering Intern	US Synthetic	01/2015	03/2015
Research Fellowship	Los Alamos National Laboratory	06/2014	08/2014
Mechanical Engineering Intern	John Deere	05/2013	08/2013

List your significant academic honors, fellowships, scholarships, publications and presentations.

- Brigham Young University (BYU) Heritage Academic Scholarship (4 years of full tuition)
- Sallie Mae Bank Scholarship (1 year full tuition)
- Graduated Cum Laude with my bachelor's degree in mechanical engineering from BYU in April 2016
- Los Alamos Dynamic Summer School Research Fellowship
- Co-authored "Multimodal Sensing Strategies for Detecting Transparent Barriers Indoors from a Mobile Platform" published in the 2015 SPIE Conference Proceedings
- Individually presented "Multimodal Sensing Strategies for Detecting Transparent Barriers Indoors from a Mobile Platform" at the 2015 SPIE Conference
- Earned Eagle Scout Award

#### Additional Graduate School Information

Are you or have you been in a joint baccalaureate-master's degree program? No

Baccalaureate Institution: Brigham Young University

Current Institution: Brigham Young University

#### PROPOSED FIELD OF STUDY

Primary Field of Study: Engineering - Mechanical Engineering

Tentative Panel Name:

Is your proposed graduate study interdisciplinary? No

What is the highest level degree toward which you expect to work while on your fellowship tenure? (Your answer will be used for statistical purposes only and will not be seen by the selection panel.)

Degree: Master's Degree

#### PROPOSED GRADUATE STUDY

Proposed University or College: Brigham Young University

Proposed Graduate Program: Mechanical Engineering

City: Provo

State: UT

Country: United States

## REFERENCES

List names and organizational affiliations of individuals submitting Letters of Reference (at least three reference letters must be received by the published deadline for the application to be complete).

Last Name	First Name	MI	Organization	E-mail Address	Ref. Rank	Status
Killpack	Marc		Brigham Young University	marc_killpack@byu.edu	1	Unsubmitted
Zirbel	Shannon		The Aerospace Corporation	shannon.zirbel@aero.org	2	Received
Taylor	Dorothy		Brigham Young University	dorothytaylor08@gmail.com	3	Unsubmitted

## PERSONAL, RELEVANT BACKGROUND AND FUTURE GOALS STATEMENT

Please outline your educational and professional development plans and career goals. How do you envision graduate school preparing you for a career that allows you to contribute to expanding scientific understanding as well as broadly benefit society?

Describe your personal, educational and/or professional experiences that motivate your decision to pursue advanced study in science, technology, engineering or mathematics (STEM). Include specific examples of any research and/or professional activities in which you have participated. Present a concise description of the activities, highlight the results and discuss how these activities have prepared you to seek a graduate degree. Specify your role in the activity including the extent to which you worked independently and/or as part of a team. Describe the contributions of your activity to advancing knowledge in STEM fields as well as the potential for broader societal impacts (See Solicitation, Section VI, for more information about Broader Impacts).

NSF Fellows are expected to become globally engaged knowledge experts and leaders who can contribute significantly to research, education, and innovations in science and engineering. The purpose of this essay is to demonstrate your potential to satisfy this requirement. Your ideas and examples do not have to be confined necessarily to the discipline that you have chosen to pursue.

If you have completed more than 12 months of graduate or post-baccalaureate study or a graduate or professional degree and an interruption of at least two consecutive years (fourth option under Completed Study in the NSF GRFP Program Information section), please address the reasons for the interruption in graduate study here. Please refer back to that section for details.

Reviewers will read both statements. Please address Intellectual Merit and Broader Impacts in both written statements in order to provide reviewers with the information necessary to evaluate your application with respect to both Criteria. Please refer to the Program Solicitation for further information on the NSF Merit Review Criteria and Broader Impacts activities.

Document Uploaded: Yes

## GRADUATE RESEARCH PLAN STATEMENT

Present an original research topic that you would like to pursue in graduate school. Describe the research idea, your general approach, as well as any unique resources that may be needed for accomplishing the research goal (i.e., access to national facilities or collections, collaborations, overseas work, etc.) You may choose to include important literature citations. Address the potential of the research to advance knowledge and understanding within science as well as the potential for broader impacts on society. The research discussed must be in a field listed in the Solicitation (Section X, Fields of Study).

Document Uploaded: Yes

## Proposed Research Title

The title should be brief informative, scientifically or technically valid, intelligible to a scientifically or technically literate reader, and suitable for use in the public press. It should describe in succinct terms your proposed research, reflecting the contents of your proposal. Use key words, and do not use abbreviations and chemical formulas (in 255 characters or less). This title will be used for searching research topics using the key words you supply. Do not use curly brackets, {}, in your Proposed Research Title or Key Words.

**Proposed Research Title:** Control Methods for Coordinated, Multi-Arm Manipulation with Soft Robots

**Use key words to describe the Graduate Research Plan Statement (in 50 characters or less).**

**Key Words:** Controls, Coordinated Manipulation, Soft Robots

**Is the proposed graduate research plan expected to have a significant international component?:** No

## NSF GRFP PROGRAM INFORMATION

Mark the choice that most appropriately describes your stage of study. All graduate and post-baccalaureate study completed as of August 1 of this year must be counted, except graduate-level courses taken as an undergraduate.

First-year graduate student this fall (having started in summer or fall of this year).

### Academic Advisor

If you are currently enrolled in graduate school (options 2 or 3), provide the name(s) of your current or potential academic graduate research advisor(s). If you do not have a current or potential academic graduate research advisor, provide the contact information of your graduate program director. Entry of at least one advisor is required with a maximum of three.

First Name	MI	Last Name	E-mail Address
Marc		Killpack	marc_killpack@byu.edu

NSF publishes the names, the baccalaureate and current institutions, and the fields of study of Fellowship recipients and Honorable Mention List on FastLane.

Do you wish your name to be published on the Honorable Mention List, posted at <https://www.fastlane.nsf.gov/grfp/?>: Yes

Please indicate how you learned about the NSF Graduate Research Fellowships (check all that apply).

Poster: No

Faculty Member or Mentor: Yes

Friend/Other Student: No

College/University Administration: No

Internet Website: No

Social Media: No

Conference/Workshop/Presentation: No Specify:

Other: No Specify:

If you have applied for any other fellowships this year, please select them from the following list. NSF is interested in this information for statistical purposes only. Submission of the requested information is voluntary and is not considered during the review process. If a particular fellowship is not in the list, select 'Other (please specify)' and specify the other fellowships in the box provided.

The Graduate Research Fellowship may not be accepted if the individual accepts or is supported by another federal graduate fellowship.

Fellowships:

Other Fellowships: