

DAVIS REMPE

INTERESTS Computer Graphics, Data Visualization, Computer Vision, Image Processing

EDUCATION **B.S. in Computer Science, B.S. in Mathematics, Minor in Physics**

University of Nebraska – Lincoln (UNL)

2012 - Present

- Expected date of graduation: December, 2016
- GPA: 3.925, Computer Science/Math GPA: 4.0
- Completed 24 credit hours in Johnny Carson School of Theatre & Film

Education Abroad

Anglo-American University - Prague, Czech Republic

Summer 2014

- Lived in Prague for two months in the summer while taking three classes.

High School Diploma

Lincoln Southwest High School - Lincoln, NE

2008 - 2012

- GPA: 4.29
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ACHIEVEMENTS **Undergraduate Creative and Research Experience (UCARE) Award Recipient**

AND AWARDS 2015 – 2016: Funding for individual computer science research for the academic year.

2013 – 2014: Funding for group physics research for the academic year.

Regents Scholarship Recipient

2012 – Present

D & F Eastman Scholarship Recipient

2013 – Present

Honors Program Book Scholarship Recipient

2012 – Present

Hixon-Lied College of Fine and Performing Arts Dean's List

Spring/Fall 2013, Spring/Fall 2014, Spring 2015

College of Arts and Sciences Dean's List

Fall 2012, Spring/Fall 2013, Spring/Fall 2014, Fall/Spring 2015

UNL High Scholar

2013, 2014, 2015

College of Arts and Sciences Celebration of Excellence for Academic Achievement

RESEARCH
EXPERIENCE

Undergraduate Researcher under Dr. Stephen Reichenbach, UNL

June, 2015 - Present

- Research data alignment algorithms for comprehensive two-dimensional gas chromatography.
- Awarded UCARE funding.

Undergraduate Researcher under Dr. Aaron Dominguez, High Energy Physics Lab, UNL
January, 2013 – May, 2014

- Characterization and construction of silicon pixel detectors for CMS experiment at CERN. Programmed gantry system for detector construction. Minor data analysis using ROOT framework.
- Awarded UCARE funding.

Undergraduate Researcher under Dr. Timothy Gay, Polarized Electron Physics Lab, UNL
June, 2012 – September, 2012

- Research and refurbished vacuum pump system. Polarized light optics project.
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PROFESSIONAL
EXPERIENCE

Software Development Intern, GC Image, Lincoln, NE

August, 2014 – August, 2015

- Worked on large-scale scientific software for visualizing and analyzing comprehensive two-dimensional gas and liquid chromatography data. Required computer programming (largely in Java), software development, software testing, and technical documentation.
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TEACHING
EXPERIENCE

Teaching Assistant for CSCE 310H – Honors Data Structures and Algorithms

Spring 2016

Coding Seminar Teacher for Society of Physics Students

Fall 2014 – Present

- Lead a weekly class that teaches undergraduates from the Society of Physics Students introductory programming concepts by learning C++.
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MEMBERSHIP

University Honors Program

2012 – Present

- Requires extra academic achievements to be fulfilled throughout undergraduate education, including 24 hours of honors classes and completion of senior thesis.

Society of Physics Students

2012 – Present

- Secretary: 2014 – 2016. Coding seminar teacher.
 - Group of students passionate about physics and exploring the discipline further. Participated in many volunteering and scientific outreach opportunities including:
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Public Nights at Behlen Observatory, Astronomy Day, Science Olympiad National Competition 2015.

Math Club

2012 – Present

Upsilon Pi Epsilon, International Computer Science Honor Society

Fall 2015 – Present

Pi Mu Epsilon, National Mathematics Honorary Society

Fall 2014 – Present

Phi Eta Sigma, National Freshmen Honor Society

Spring 2013 – Present

Alpha Lambda Delta, National Freshmen Honor Society

Spring 2013 – Present

PUBLICATION S. Reichenbach, **D. Rempe**, Q. Tao, D. Bressanello, E. Liberto, C. Bicchi, S. Balducci, and C. Cordero. "Alignment for Comprehensive Two-Dimensional Gas Chromatography with Dual Secondary Columns and Detectors." *Analytical Chemistry*, 87:10056-10063, 2015.

COMPUTER SKILLS **Programming Languages**

- Expert: Java
- Competent: C++, MATLAB, JavaScript, WebGL, HTML
- Exposed to: OpenGL, MySQL

Operating Systems

- Microsoft Windows, Linux (Ubuntu), some Mac OS X

Selected Software

- Git, vim, Eclipse, Adobe After Effects, Maya
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REFERENCES **Dr. Stephen Reichenbach**, Research Advisor at UNL

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