

# SEAN RICHARDSON

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## EDUCATION

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### **Lewis & Clark College, Portland Oregon**

*September 2016 - May 2020*

Cumulative GPA: 3.973, Math & CS GPA: 4.0, Physics GPA: 4.0

Bachelor of Arts in Computer Science and Mathematics

Bachelor of Arts in Physics

### **Budapest Semesters in Mathematics, Budapest Hungary**

*Summer 2019*

A mathematics study abroad program for advanced undergraduates. Achieved grade A in all courses.

## RESEARCH EXPERIENCE

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### **3-Orbifolds and their Laplace Spectra**

*Lewis & Clark College, Summer 2018*

A mathematics research project under faculty advisor Liz Stanhope. The result: a proof that two abstract geometric constructions must have the same local orientability to have the same resonance frequencies, resulting in the published paper “You can hear the local orientability of an orbifold”.

### **Identifying Clouds with Neural Networks**

*Lewis & Clark College, Summer 2017*

An interdisciplinary research project in which myself and a peer implemented and trained a convolution neural network that takes a picture of the sky as input and distinguishes between clear, thin cloud, and thick cloud pixels with 94% accuracy. Worked under faculty advisors Peter Drake and Jessica Kleiss.

## ACADEMIC ACHIEVEMENTS

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### **Pi Mu Epsilon Honors Society**

*November 2019*

A national mathematics honors society; membership determined by college math faculty.

### **Published Academic Paper**

*October 2019*

“You can hear the local orientability of an orbifold” in *Differential Geometry and its Applications*.

### **Scholar Athlete of the Year Award**

*May 2019*

An award bestowed by Lewis & Clark athletic administration for academic and athletic achievements.

### **Feynmann Book Award to Outstanding Introductory Physics Student**

*May 2018*

Bestowed by college physics faculty to the top sophomore physics student based on academics.

### **CCSC Conference Presentation**

*October 2017*

Poster presentation of cloud identification research in 2017 CCSC conference; our poster won first prize.

### **Pamplin Honors Society**

*September 2017*

Membership extended by the Society to seven Lewis & Clark students annually for academics/leadership.

## LEADERSHIP

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**Peer Tutor:** (*Fall 2017-Present*) Tutor at Lewis & Clark quantitative resource center for math, physics, and computer science. Requires checking in with all students and looking after center materials.

**Guiding Classes:** Trusted to help teach the occasional Lewis & Clark class in the case of an unavailable professor. Specifically, two quantitative reasoning classes and a Putnam test preparation class.

**Grader:** (*Fall 2019, Spring 2020*) A grader for various math and physics classes at Lewis & Clark.

**Running Athlete:** (*Fall 2016-Spring 2020*) Four year varsity athlete for Lewis & Clark cross country and track teams. Took on leadership role junior and senior years as most experienced distance runner.