Zoë Marschner

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Education

Massachusetts Institute of Technology; Cambridge, MA — 2019–Expected 2023
Anticipated BS in Computer Science & Engineering (Course 6-3) and Math (Course 18), GPA 4.8/5.0

Ithaca High School; Ithaca, NY — 2015-2019
Regents Diploma with Advanced Designation in Math and Science, GPA: 4.23/4.33

Research

SOS Geometry Processing — Spring 2020–Current
MIT Geometric Data Processing Group
Currently ongoing work applying SOS relaxation to various geometric problems involving higher-order patches, such as intersections between these patches, to enable the use of higher-order patches in a wider variety of applications

Hexahedral Mesh Repair via Sum-of-Squares Relaxation — Winter–Spring 2020
MIT Geometric Data Processing Group
Offers a robust method for evaluating the validity of hexahedral elements using the machinery of SOS relaxation, novel to the field of geometry processing, and presents an iterative method to repair an invalid hex mesh that results in a certifiably valid mesh.

Publication: Marschner, Zoë, David Palmer, Paul Zhang, and Justin Solomon, (2020), "Hexahedral Mesh Repair via Sum-of-Squares Relaxation". *Computer Graphics Forum*, 39: 133-147. doi:10.1111/cgf.14074.

Experience

MIT 6.009; Lab Assistant — Spring 2020–Current
Helped students during office hours in MIT's Fundamentals of Programming class

Salesforce; Software Engineering Intern — Summer 2020
Worked on real-time analytics tool for Salesforce Philanthropy Cloud

Women in Computing at Cornell; iOS App Development — 2017–2019
Designed and built an iOS app to help WICC organize their events

Honors

CRA Undergraduate Researcher Award Honorable Mention — 2020
Anna Pogosyants UROP Award — 2020
Cornell University Department of Computer Science Award — 2019
Hans Bethe Prize in Physics (awarded by Cornell University) — 2019
1st Place in Cornell Girls High School Programming Contest — 2019
RIT Computing Medal — 2018