

# Sarah Anne Kushner

PHD STUDENT · COMPUTER GRAPHICS

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## Education

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### University of Toronto

PHD IN COMPUTER SCIENCE – GEOMETRY PROCESSING & FABRICATION

Advised by Alec Jacobson

Toronto, ON, Canada

Sept. 2017 - 2022

### Institut polytechnique de Grenoble (Grenoble INP)

MS IN INFORMATICS – GRAPHICS, VISION & ROBOTICS

Advised by Marie-Paule Cani and Rémi Ronfard

Thesis: *The Sketch-Based Posing and Animation of Multiple Characters: Animation of Dancing Couples*

Grenoble, France

Sept. 2016 - Jun. 2017

### Drexel University

BS IN COMPUTER SCIENCE, MINOR IN DIGITAL MEDIA

Magna Cum Laude

Philadelphia, PA, USA

Sept. 2012 - Jun. 2016

## Publications & Posters

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### Levitating Rigid Objects with Hidden Rods and Wires

EUROGRAPHICS

Sarah Kushner, Risa Ulinski, Karan Singh, David I.W. Levin, Alec Jacobson

Vienna, Austria (remote)

May 2021

### Example-Based Print Preview for Laser Cutting (Poster)

GRAPHICS INTERFACE

Sarah Kushner, Alec Jacobson

Toronto, ON, Canada

May 2018

### Ontology-Driven Data Semantics Discovery for Cyber-Security

PRACTICAL ASPECTS OF DECLARATIVE LANGUAGES

Marcello Balduccini, Sarah Kushner, Jacquelin Speck

Portland, OR, USA

Jun. 2015

## Talks

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### Levitating Rigid Objects with Hidden Rods and Wires

TORONTO GEOMETRY COLLOQUIUM

Toronto, ON, Canada

April 2021

### Levitating Rigid Objects with Hidden Rods and Wires

UNIVERSITY OF TORONTO GRAPHICS CLUB RAPID FIRE TALKS

Toronto, ON, Canada

March 2021

### Sneakily Staging Structurally Sound Supports

MONTREAL TORONTO GRAPHICS WORKSHOP

Waterloo, ON, Canada

November 2019

### Invisible Supports for 3D Zoetrope Movies

MONTREAL TORONTO GRAPHICS WORKSHOP

Montréal, QC, Canada

November 2018

### Realistic Example-Based Print Preview for Laser Cutting

MONTREAL TORONTO GRAPHICS WORKSHOP

Toronto, ON, Canada

November 2017

## Teaching

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### Course Instructor

CSC 418/2504 - COMPUTER GRAPHICS

Taught the fourth year undergraduate graphics course remotely to ~70 students

University of Toronto

Summer 2020

## Teaching Assistant

University of Toronto

CSC 419/2520 - GEOMETRY PROCESSING

CSC 2521 - TOPICS IN COMPUTER GRAPHICS: SEMINAR ON GEOMETRY AND ANIMATION

CSC 418/2504 - COMPUTER GRAPHICS

2017-2020

CSC 320 - INTRODUCTION TO VISUAL COMPUTING

CSC 318 - INTERACTIVE COMPUTATIONAL MEDIA

Lead discussions on seminal research papers in graphics

Created marking schemes, marked assignments and exams

## Honors and Awards

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### Beatrice Worsley Graduate Scholarship in Computer Science

University of Toronto

RECEIVED, \$4000 CAD

2018

Awarded to PhD students who have taken an active role in helping to promote women in the field of computer science

### Grenoble INP Fondation Bourse d'Excellence Internationale

Grenoble INP

RECEIVED, €5000 EUR

2016/2017

Attract talented international students with strong academic and professional potential to engineering training at Grenoble INP

### Fulbright Study/Research Fellowship

Fulbright U.S. Student Program

SEMI-FINALIST

2016/2017

Study/research grant to design a project to work on with advisers at foreign universities

### James B. Maginnis Award

Drexel University

RECEIVED, \$500 USD

Winter 2016

Presented to an upper division student majoring in computer science in recognition of academic excellence

### STAR Scholar Summer Research Program

Drexel University

RECEIVED, \$4000 USD

2013

Students Tackling Advanced Research Program

## Professional Experience

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### Inria

Montbonnot-Saint-Martin, France

RESEARCH INTERN (STAGIAIRE)

Feb. 2017 - Jun. 2017

Project on sketch-based animation techniques and numerical methods to animate multiple characters

### Applied Informatics Group

Philadelphia, PA, USA

RESEARCH SOFTWARE ENGINEER CO-OP

Sept. 2014 - Mar. 2015

Project on building a robust intelligent system to answer cybersecurity queries

## Activities

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### LEADERSHIP

#### HER CODE CAMP

Affiliated with University of Toronto

DIRECTOR OF MARKETING, DIRECTOR OF MENTORSHIP

Sept. 2019 - present

Helped organize Python workshops to high school students in the Toronto area who are women or non-binary

### MENTORING UNDERGRADUATES & HIGH SCHOOL STUDENTS

#### Anqi Li

University of Toronto

MENTOR

Apr. 2021 - present

Mechanical engineering of large scale zoetropes

#### Cindy Zhu and Kevin Huang

(visiting) Unionville High School

MENTOR

Apr. 2018 - Jun. 2020

Project on viewing meshes in VR

#### Arjun Chhabra

University of Toronto

MENTOR

Jun. 2018 - Sept. 2018

Project on visualization tools for laser cutting

### MEMBERSHIPS

**ACM SIGGRAPH**

**Upsilon Pi Epsilon (International Honor Society for the Computing Disciplines)**

**University of Toronto DCS Women**

*Oct. 2012 - present*

*Oct. 2014 - present*

*Sept. 2017 - present*