

# Yue Jiang

yuejiang@cs.umd.edu

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## Education

- 2018 - **Graduate Studies in Computer Science** Specialized in **Computer Graphics**  
**University of Maryland, College Park**  
Supervisor: **Prof. Matthias Zwicker**
- 2014 - 2017 **Honors Bachelor of Science in Computer Science Specialist and Mathematics Major (High Distinction)** [Degree granted in 2018.]  
**University of Toronto**  
Supervisor: Prof. Gerald Penn

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## Publications

- [5] ORCLayout: Adaptive GUI Layout with OR-Constraints  
**Yue Jiang**, Ruofei Du, Christof Lutteroth, Wolfgang Stuerzlinger  
In Proceedings of the 37th Annual SIGCHI Conference on Human Factors in Computing Systems (**CHI2019**).
- [4] ORCSolver: An Efficient Solver for Adaptive GUI Layout with OR-Constraints  
**Yue Jiang**, Wolfgang Stuerzlinger, Matthias Zwicker, Christof Lutteroth  
In Proceedings of the 38th Annual SIGCHI Conference on Human Factors in Computing Systems (**CHI2020**) (Conditionally accepted).
- [3] The Government's Dividend: Complex Perceptions of Social Media Misinformation in China  
Zhicong Lu, **Yue Jiang**, Cheng Lu, Mor Naaman, Daniel Wigdor  
In Proceedings of the 38th Annual SIGCHI Conference on Human Factors in Computing Systems (**CHI2020**) (Conditionally accepted).
- [2] SDFDiff: Differentiable Rendering of Signed Distance Fields for 3D Shape Optimization  
**Yue Jiang**, Dantong Ji, Zhizhong Han, Matthias Zwicker  
[In Submission]

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## Professional Experience

- May 2017 Software Engineer
- April 2018 **Intel Corporation**, San Jose, California
- Programmable Intellectual Property Engineering (PIPE) Infrastructure Group.
  - Developed software tools for all IP groups at Intel. (Python, Perl)

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## Academic Service (Program Committee)

2020 **Associate Chair (AC)** for CHI Late Breaking Work (SIGCHI)

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## Academic Service (Reviewing)

2020 SIGCHI

2020 IEEE VR

2019 TPAMI

2019 Pacific Graphics (PG)

2019 CHI Late Breaking Work (SIGCHI)

2019 IFIP Conference on Human-Computer Interaction (INTERACT)

2019 Graphics Interface (GI)

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## Research Experience

August 2018 Graduate Research Assistant

– Now **Computer Graphics Group, University of Maryland, College Park**

Supervisor: **Prof. Matthias Zwicker**

- Multi-view 3D reconstruction with differentiable rendering
- Single-view 3D reconstruction with deep learning
- Sketch-based 3D reconstruction
- a technical paper submission to **CVPR2020**.

May 2019 Visiting Graduate Research Assistant

– Aug 2019 **Visual Computing Research Center, Shenzhen University**

Supervisor: **Prof. Daniel Cohen-Or & Prof. Hui Huang**

- Sketch-based 3D reconstruction

2018 Research Collaboration

– Now **Bath University & Simon Fraser University (Remote)**

**Human Computer Interaction Group**

Supervisor: **Prof. Wolfgang Stuerzlinger & Prof. Christof Lutteroth**

- Proposed a novel solver for adaptive GUIs.
- a technical paper conditionally accepted to **CHI2020**.

June 2017 Research Assistant

– Sept 2018 **Department of Computer Science, Simon Fraser University (Remote)**

**Human Computer Interaction Group**

Supervisor: **Prof. Wolfgang Stuerzlinger**

- Proposed a novel constraint-based system to unify multiple different layouts, such as flow layout and grid layout.
- Solved the constraint-based system using a linear programming methodology to create valid and flexible layout patterns for any window size and ratio.
- Published a technical paper on **CHI2019**.

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- May 2016 Undergraduate Research Assistant (Undergrad Thesis)
- April 2017 **Computational Linguistics Group, University of Toronto**  
Supervisor: **Prof. Gerald Penn**
- Worked on vector addition tree automata and reachability problem for vector addition systems
  - Tried to prove the correctness of an algorithm about Lambek Categorical Grammar for Practical Parsing.
- July 2015 Undergraduate Research Assistant
- Aug 2015 **Human Computer Interaction Group, University of Toronto**  
Supervisor: **Prof. Daniel Wigdor**
- Wrote back-end for Automatic Interview Transcription using Python.
- May 2015 Undergraduate Research Assistant
- Aug 2015 **Computational Photography Group, University of Toronto**  
Supervisor: **Prof. Kyros Kutulakos**
- Drew optical systems using Zemax.
  - Studied light field cameras, such as Lytro and Raytrix cameras.

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## Invited Talks

- Dec 3, 2019 Adobe Research Talk  
**Adobe Research**
- Topic: **ORC Layout: Adaptive GUI Layout with OR-Constraints**
  - Invited by: Dr. Vlad Morariu
- July 11, 2019 Shenzhen University Visual Computing Summer School 2019  
**Shenzhen University**
- Topic: **ORC Layout: Adaptive GUI Layout with OR-Constraints**
  - Invited by: Prof. Hui Huang
- May 15, 2019 Capital Graphics 2019  
**George Mason University, Arlington, VA, USA**
- Topic: **Signed Distance Function Based Differentiable Rendering**
  - Invited by: Prof. Yotam Gingold
- May 7, 2019 CHI2019 Paper Session in Intelligent Systems and Interfaces  
**The ACM CHI Conference on Human Factors in Computing Systems, Glasgow, UK**
- Topic: **ORC Layout: Adaptive GUI Layout with OR-Constraints**
- May 2, 2019 UMD HCI Lab BBL Talk  
**Human Computer Interaction Lab, University of Maryland**
- Topic: **ORC Layout: Adaptive GUI Layout with OR-Constraints**
  - Invited by: UMD HCI Group

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- April 4, 2019 Human-Computer Interaction Lab 36th Annual Symposium  
**Human Computer Interaction Lab, University of Maryland**  
 - Topic: **ORC Layout: Adaptive GUI Layout with OR-Constraints**  
 - Invited by: Prof. Niklas Elmqvist
- April 1, 2019 UMD HCI Lab SIGCHI Paper Talk Session  
**Human Computer Interaction Lab, University of Maryland**  
 - Topic: **ORC Layout: Adaptive GUI Layout with OR-Constraints**  
 - Invited by: Prof. Hernisa Kacorri
- Jun 21, 2018 Talk in Knowledge Representation and Reasoning Group  
**Department of Computer Science, University of Toronto**  
 - Topic: **Neural Programmer Interpreter**  
 - Invited by: Prof. Sheila McIlraith
- Nov 8, 2016 Talk in Mathematical Linguistics Group  
**Department of Computer Science, University of Toronto**  
 - Topic: **Vector Addition Systems Reachability Problem**  
 - Invited by: Prof. Gerald Penn
- Oct 25, 2016 Talk in Mathematical Linguistics Group  
**Department of Computer Science, University of Toronto**  
 - Topic: **Supertagging: A Non-Statistical Parsing-Based Approach**  
 - Invited by: Prof. Gerald Penn
- Oct 3, 2016 University of Toronto Undergraduate Computer Theory Group Talk  
**Department of Computer Science, University of Toronto**  
 - Topic: **Reachability Problems for Vector Addition Systems**  
 - Invited by: UofT Theory Group
- July 20, 2016 Undergraduate Summer Research Program (UGSRP) Talk  
**Department of Computer Science, University of Toronto**  
 - Topic: **Reachability Problems and Vector Addition Tree Automata**  
 - Supervisor: Prof. Gerald Penn

## Teaching Experience

- Jan 2020 Graduate Teaching Assistant  
 – May 2020 **Department of Computer Science, University of Maryland**  
**CMSC740 Advanced Computer Graphics**  
 Instructor: Prof. Matthias Zwicker
- Aug 2019 Graduate Teaching Assistant  
 – Dec 2019 **Department of Computer Science, University of Maryland**

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## CMSC427 Computer Graphics

Instructor: Prof. Matthias Zwicker

- Aug 2018 Graduate Teaching Assistant
- Dec 2018 **Department of Computer Science, University of Maryland**  
**CMSC427 Computer Graphics**  
Instructor: Prof. Matthias Zwicker
  
- Jan 2017 Teaching Assistant
- Apr 2017 **Department of Computer Science, University of Toronto**  
**CSC263 Data Structures and Analysis**  
Instructors: Prof. Sam Toueg and Prof. Francois Pitt
  
- Sept 2016 Teaching Assistant
- Dec 2016 **Department of Computer Science, University of Toronto**  
**CSC263 Data Structures and Analysis**  
Instructor: Prof. David Liu
  
- Jan 2016 Teaching Assistant
- Apr 2016 **Department of Computer Science, University of Toronto**  
**CSC165 Mathematical Expression and Reasoning for CompSci**  
Instructors: Dr. Ilir Dema and Dr. Abdallah Farraj
  
- 2015 - 2016 Peer Tutor  
**Department of Mathematics, University of Toronto**  
**MAT137 Calculus**  
**MAT223/224 Linear Algebra I & II**
  
- July 2014 Teaching Volunteer  
**U of T Touching Lives Overseas**  
Qinyuan, Shanxi Province, China
  - High school Mathematics and Physics.
  - Elementary school Mathematics.

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## Honours

- 2019 Jacob K. Goldhaber Travel Grant Award
- 2019 Department of Computer Science Travel Grant Award, University of Maryland
- 2018 - 2020 Graduate Dean's Scholarship, University of Maryland, College Park
- Sept. 2018 Maryland Center For Women In Computing (MCWIC) Grace Hopper Scholarship
- 2017 - 2018 Dean's List Scholar, University of Toronto
- 2016 - 2017 Dean's List Scholar, University of Toronto
- 2015 - 2016 Dean's List Scholar, University of Toronto
- 2015 - 2016 New College Council In-Course Scholarship, University of Toronto

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- 2014 - 2015 Dean's List Scholar, University of Toronto
- 2014 - 2015 New College Council In-Course Scholarship, University of Toronto
- 2014 - 2015 Award for Outstanding Achievement in Mathematical Expression and Reasoning for Computer Science, University of Toronto
- 2012 National Olympiad in Biology in Provinces, First Prize
- 2011 China Adolescents Science and Technology Innovation Contest, First Prize (Ranked 2 in Jiangsu Province)

## Mentoring Experience

- 2018 Fall, 2019 Fall **Graduate Mentor for Technica (all-women hackathon)** – University of Maryland, College Park
  - Was a graduate mentor for an Augmented Reality (AR) project
  - Our project was related to AR and the Microsoft hololens. We built an app that could support learning of foreign languages in the Microsoft Hololens. We used Microsoft cloud services to perform image analysis and text to speech synthesis so that the app would analyze what the user sees and produce a spoken description of the scene in multiple languages and display the text in foreign languages on the AR display.
- 2018, 2019 **Maryland Center For Women In Computing (MCWIC) Peer mentoring** – University of Maryland, College Park
  - Was a graduate peer mentor for several undergraduate female students.

## University Service

- March 2019 **Ph.D Student Panel Leader for Prospective Students** – University of Maryland, College Park
  - Led a student panel for potential Ph.D student of University of Maryland, College Park on campus visit day.
- 2019, 2020 **Ph.D. & Master Admission Committee Member** – University of Maryland, College Park
  - Reviewed Ph.D. and master applications for the Department of Computer Science at the University of Maryland.
- Nov 2018, Nov 2019 **Graduate Volunteer for Technica Research Bootcamp** – University of Maryland, College Park
  - Led a research Bootcamp for female undergraduate students.
- 2016 **Department of Mathematics Ambassador** – University of Toronto
  - Represented the Department of Mathematics in outreach events to prospective students and their parents.

## Press Coverage

- May 8, 2019 **Eases the pain of multiple UI designs** – IT Works Solution
- May 7, 2019 **New open source software eases the pain of multiple UI designs** – Phys.org
- May 7, 2019 **New software eases the pain of multiple UI designs** – University of Bath, UK

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## Voluntary Experience

April 2019 **Student Volunteer for Human-Computer Interaction Lab 36th Annual Symposium** – Maryland, USA

May 2016 **Doors Open Toronto 2016** – City Cultural Events  
- Served visitors and tourists for Cornell Campbell House built in 1800s.

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## Technical Skills

Programming: Python, C/C++, Java, Matlab, Perl, CUDA

Other Tools: PyTorch, OpenGL, OpenCV, Numpy, Scipy, NLTK, Scikit-learn, LaTeX, SQL, Splunk, SVN, Github, Perforce, Unity, Fusion360, 3D Max

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## References

Mentors and collaborators who have written references for me:

**Prof. Matthias Zwicker** – Professor, University of Maryland, College Park, USA

**Prof. Wolfgang Stuerzlinger** – Professor, Simon Fraser University, Canada

**Prof. Christof Lutteroth** – Associate Professor, University of Bath, UK

**Prof. Gerald Penn** – Professor, University of Toronto, Canada

**Prof. Sam Toueg** – Professor, University of Toronto, Canada

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