

# Rahul Arora

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**CONTACT INFORMATION** DGP Lab, Bahen Centre for IT  
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**RESEARCH INTERESTS** Interactive Computer Graphics  
Human-Computer Interaction  
Virtual and Augmented Realities

**EDUCATION** *PhD, University of Toronto* 2015-Present  
Major: Computer Science  
CGPA: 4.0/4.0  
*MTech, Indian Institute of Technology, Kanpur* 2014-2015  
Major: Computer Science and Engineering  
CGPA: 9.6/10.0  
*BTech, Indian Institute of Technology, Kanpur* 2010-2015  
Major: Computer Science and Engineering  
CGPA: 8.5/10.0

**PUBLICATIONS** **Volumetric Michell Trusses for Parametric Design & Fabrication**  
*Rahul Arora, Alec Jacobson, Timothy R. Langlois, Yijiang Huang, Caitlin Mueller, Wojciech Matusik, Ariel Shamir, Karan Singh, and David I.W. Levin*  
*ACM Symposium on Computational Fabrication 2019 (SCF '19)*

**Designing Volumetric Truss Structures for Computational Fabrication**  
*Rahul Arora, Alec Jacobson, Timothy R. Langlois, Karan Singh, and David I.W. Levin*  
*Graphics Interface 2018 Posters (GI '18)*

**SymbiosisSketch: Combining 2D and 3D Sketching for Designing Detailed 3D Objects in Situ**  
*Rahul Arora, Rubaiat Habib Kazi, Tovi Grossman, George Fitzmaurice, and Karan Singh*  
*ACM SIGCHI Conference on Human Factors in Computing Systems 2018 (CHI '18)*

**Experimental Evaluation of Sketching on Surfaces in VR**  
*Rahul Arora, Rubaiat Habib Kazi, Fraser Anderson, Tovi Grossman, Karan Singh, and George Fitzmaurice*  
*ACM SIGCHI Conference on Human Factors in Computing Systems 2017 (CHI '17)*

**SketchSoup: Exploratory Ideation using Design Sketching**  
*Rahul Arora, Ishan Darolia, Vinay P. Nambodiri, Karan Singh, and Adrien Bousseau*  
*Computer Graphics Forum (CGF) 2017, presented at Eurographics 2017*

**Derandomizing Isolation Lemma for  $K_{3,3}$ -free and  $K_5$ -free Bipartite Graphs**  
*Rahul Arora, Ashu Gupta, Rohit Gurjar, and Raghunath Tewari*  
*Symposium on Theoretical Aspects of Computer Science (STACS) 2016*

<b>TEACHING EXPERIENCE</b>	<b>Computer Graphics</b> , University of Toronto Teaching Assistant for Prof. Karan Singh and Prof. David Levin	Winter 2018
	<b>Computer Graphics</b> , University of Toronto Teaching Assistant for Prof. Karan Singh and Prof. Alec Jacobson	Fall 2017
	<b>Intro to Theory of Computation</b> , University of Toronto Teaching Assistant for Prof. Azadeh Farzan	Fall 2015
	<b>Introduction to Computer Graphics</b> , IIT Kanpur Teaching Assistant for Prof. Vinay P. Namboodiri	Fall 2014
<b>SELECTED INTERNSHIPS</b>	<b>Adobe Research, Seattle, USA</b> <i>Mentored by Dr. Rubaiat Habib, Dr. Danny Kaufman, and Dr. Wil Li</i> Studied gestural methods for authoring animations in VR.	Summer 2018
	<b>Autodesk Research, Toronto, Canada</b> <i>Mentored by Dr. Tovi Grossman and Dr. Rubaiat Habib</i> Developed a prototype augmented reality tool for concept sketching in 3D.	Winter 2017
	<b>Autodesk Research, Toronto, Canada</b> <i>Mentored by Dr. Tovi Grossman and Dr. Rubaiat Habib</i> Conducted controlled experiments to understand 3D sketching ability.	Summer 2016
	<b>Adobe Research, Bangalore, India</b> <i>Mentored by Ramesh Srinivasaraghavan</i> Built a gamified crowdsourcing platform for object recognition tasks.	Summer 2013
<b>AWARDS AND RECOGNITION</b>	Adobe Research Fellowship 2019 (US \$10,000)	2018
	Adobe Research Fellowship 2018 finalist	2017
	Mitacs Accelerate Award for industrial partnership (CA \$15,000)	2016
	Merit-cum-Means Scholarship, IIT Kanpur	2010–2014
	Academic Excellence Award, IIT Kanpur (top 5% students)	2013
<b>REVIEWING EXPERIENCE</b>	Human Factors in Computing Systems (CHI)	2017–2019
	User Interface Software and Technology (UIST)	2018–2019
	Transactions on Visualization and Computer Graphics (IEEE TVCG)	2019
	Virtual Reality (IEEE VR)	2018
	Designing Interactive Systems (DIS)	2018
	Spatial User Interfaces (SUI)	2018
	Graphics Interface (GI)	2018
	Computer Graphics and Applications (IEEE CG&A)	2017