

Rahul Arora

CONTACT INFORMATION DGP Lab, Bahen Centre for IT arorar@dgp.toronto.edu
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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 **Creative Expression with Immersive 3D Interactions (Juried/Curated)**
Rahul Arora
Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20 Doctoral Consortium)

MagicalHands: Mid-Air Hand Gestures for Animating in VR
Rahul Arora, Rubaiat Habib Kazi, Danny Kaufman, Wilmot Li, and Karan Singh
ACM Symposium on User Interface Software and Technology 2019 (UIST '19)
<https://www.dgp.toronto.edu/projects/magical-hands/>

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)
<https://doi.org/10.1145/3328939.3328999>

Designing Volumetric Truss Structures for Computational Fabrication (Juried/Curated)
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)
<https://doi.org/10.1145/3328939.3328999>

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)

<http://dx.doi.org/10.1145/3025453.3025474>

SketchSoup: Exploratory Ideation using Design Sketching

Rahul Arora, Ishan Darolia, Vinay P. Namboodiri, Karan Singh, and Adrien Bousseau

Computer Graphics Forum (CGF) 2017, presented at Eurographics 2017

<http://dx.doi.org/10.1111/cgf.13081>

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

<http://dx.doi.org/10.4230/LIPIcs.STACS.2016.10>

**TEACHING
EXPERIENCE**

Computer Graphics, University of Toronto
Teaching Assistant for Prof. Alec Jacobson

Fall 2019

Computer Graphics, University of Toronto
Teaching Assistant for Prof. David Levin

Winter 2019

Computer Graphics, University of Toronto
Teaching Assistant for Prof. Karan Singh and Prof. David Levin

Winter 2018

Computer Graphics, University of Toronto
Teaching Assistant for Prof. Karan Singh and Prof. Alec Jacobson

Fall 2017

Intro to Theory of Computation, University of Toronto
Teaching Assistant for Prof. Azadeh Farzan

Fall 2015

Introduction to Computer Graphics, IIT Kanpur
Teaching Assistant for Prof. Vinay P. Namboodiri

Fall 2014

**AWARDS AND
RECOGNITION**

Wolfond Scholarship in Wireless Information Technology: CA \$10,000 2019

UofT Libraries Grad Exhibit Competition (3 winners): CA \$1,000 2019

Adobe Research Fellowship 2019 (11 fellows): 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: Full tuition amount 2010–2014

Academic Excellence Award, IIT Kanpur (top 5% students) 2013

INTERNSHIPS

Adobe Research, Seattle, USA Summer 2019
Mentored by Dr. Timothy Langlois, Dr. Danny Kaufman, and Dr. Rubaiat Habib
Developed a method for creating highly-stylized animations of 2D fluids.

Adobe Research, Seattle, USA Summer 2018
Mentored by Dr. Rubaiat Habib, Dr. Danny Kaufman, and Dr. Wil Li
Studied gestural methods for authoring animations in VR.

Autodesk Research, Toronto, Canada	Winter 2017
<i>Mentored by Dr. Tovi Grossman and Dr. Rubaiat Habib</i>	
Developed a prototype augmented reality tool for concept sketching in 3D.	
Autodesk Research, Toronto, Canada	Summer 2016
<i>Mentored by Dr. Tovi Grossman and Dr. Rubaiat Habib</i>	
Conducted controlled experiments to understand 3D sketching ability.	
Inria, Nice, France	Summer 2014
<i>Mentored by Dr. Adrien Bousseau</i>	
Developed a user-guided method for interpolating between ideation sketches.	
Adobe Research, Bangalore, India	Summer 2013
<i>Mentored by Ramesh Srinivasaraghavan</i>	
Built a gamified crowdsourcing platform for object recognition tasks.	

REVIEWING EXPERIENCE

Human Factors in Computing Systems (CHI)	2017–2020
User Interface Software and Technology (UIST)	2018–2019
Transactions on Visualization and Computer Graphics (IEEE TVCG)	2019
Virtual Reality (IEEE VR)	2018–2020
Designing Interactive Systems (DIS)	2018
Spatial User Interfaces (SUI)	2018
Graphics Interface (GI)	2018
Computer Graphics and Applications (IEEE CG&A)	2017