

# Jeffrey Dudek

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3062 Duncan Hall, Rice University, 6100 S. Main Street, Houston, TX

## Education:

**Rice University** *Aug 2015 – Present*

Pursuing PhD in Computer Science  
Research Interests: Tensor Networks, Probabilistic Inference, SAT Solving  
Advisor: Prof. Moshe Vardi

**Rice University** *Aug 2015 – May 2017*

Master of Science in Computer Science  
Thesis: Random CNF-XOR Formulas

**Rice University** *Aug 2011 – May 2015*

Bachelor of Science in Computer Science and Bachelor of Arts in Mathematics  
Honors: *summa cum laude* (GPA 4.16/4.33)

## Publications:

### **ADDMC: Weighted Model Counting with Algebraic Decision Diagrams**

Jeffrey M. Dudek, Vu H.N. Phan, and Moshe Y. Vardi  
To appear at AAAI Conference on Artificial Intelligence (AAAI) 2020

### **Transformations of Boolean Functions**

Jeffrey M. Dudek, Dror Fried  
Foundations of Software Technology and Theoretical Computer Science (FSTTCS) 2019

### **The Hard Problems Are Almost Everywhere For Random CNF-XOR Formulas**

Jeffrey M. Dudek, Kuldeep S. Meel, and Moshe Y. Vardi  
International Joint Conference on Artificial Intelligence (IJCAI) 2017

### **Combining the $k$ -CNF and XOR Phase-Transitions**

Jeffrey M. Dudek, Kuldeep S. Meel, and Moshe Y. Vardi  
International Joint Conference on Artificial Intelligence (IJCAI) 2016

## Industrial Experience:

**Google: Software Engineering Intern** *Mountain View, CA*

*Research and Machine Intelligence: Search and Understanding.* *May 2017 – Aug 2017*  
Applied computer vision techniques to detect figures, captions, and tables in scientific publications.

**Microsoft: Software Design Engineer in Test Intern** *Redmond, WA*

*Microsoft Azure: Fabric.* *May 2014 – Aug 2014*  
Applied machine learning techniques to detect and predict large scale downtime events.

*Windows Phone: Notification Platform.* *May 2013 – Aug 2013*

Designed and implemented more reliable and complete long-term testing of the notification platform.

*Windows Phone: Services.* *May 2012 – Aug 2012*

Adapted and improved software to analyze, validate, and visualize telemetry data.

## Teaching Experience:

**COMP 140: Computational Thinking** *Fall 2013, Fall 2014*

Guided group discussions in class for 24 students 3 hours a week. Developed 2 weeks of in-class activities on statistical modeling and an associated homework assignment.

**Teaching Assistant:**

- COMP 487: Computational Complexity *Fall 2017*
- COMP 421: Operating Systems and Concurrent Programming *Spring 2017, Spring 2018*
- COMP 409: Logic in Computer Science *Fall 2016*
- COMP 411: Principles of Programming Languages *Spring 2015, Spring 2016*
- COMP 182: Algorithmic Thinking *Spring 2013*
- COMP 140: Computational Thinking *Fall 2012*

**Awards:**

**Ken Kennedy Institute - Cray Graduate Fellowship** *2017 – 2018*  
Awarded by Cray and the Ken Kennedy Institute for research in high performance computing.

**NSF Graduate Research Fellowship (Honorable Mention)** *2017*

**Ken Kennedy Institute - Enhancement Fellowship** *2015 – 2019*  
Awarded by the Rice Computer Science Department and the Ken Kennedy Institute for excellence in Computer Science.

**Zevi & Bertha Salsberg Award** *2012*  
Awarded by Will Rice College for freshman achievement.

**Trustee Scholarship** *2011 – 2015*  
Awarded by Rice University for excellence in academics.

**LJ Walsh Scholarship** *2011 – 2015*  
Awarded by Rice University for excellence in academics.

**Thomas J. Watson Memorial Scholarship** *2011 – 2015*  
Awarded by IBM for academic merit.

**Service and Extracurricular Activities:**

President, Rice Queer Graduate Student Association *Mar 2019 – Present*  
President, Rice CS Graduate Student Association *Jan 2019 – Present*  
Treasurer, Graduate Student Gaming Club (GradGames) *May 2018 – Present*

Head, Rice CS Graduate Faculty Search Committee *Spring 2017, Spring 2018, Spring 2019*  
Vice President, Rice Queer Graduate Student Association *June 2018 – Mar 2019*  
Academic Coordinator, Rice CS Graduate Student Association *Nov 2016 – Jan 2019*  
Treasurer, Rice Queer Graduate Student Association *Aug 2017 – June 2018*  
Vice President, Undergraduate Board Game Club (Fastwarp) *Aug 2012 – May 2014*