

# Nithin Varma

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## ABOUT ME

I am a postdoctoral researcher working with Dr. Ilan Newman at the University of Haifa, Israel. My main areas of interest are algorithms for large datasets (sublinear algorithms, property testing), graph algorithms, and bioinformatics algorithms.

## EDUCATION

### **Ph.D. in Computer Science**

Boston University Fall 2017 - Summer 2019  
Pennsylvania State University Fall 2014 - Summer 2017  
*Thesis Title: Massive Datasets with Missing Entries: Models and Algorithms*  
*Advisor: Dr. Sofya Raskhodnikova*

### **M.Sc. in Computer Science**

TIFR Mumbai, India August 2011 - July 2014  
*Thesis Title : Small Stretch Pairwise Spanners and D-spanners.*  
*Advisor: Dr. Kavitha Telikepalli*

### **B.Tech. in Computer Science & Engineering (Gold Medal)**

NIT Calicut, India July 2007 - June 2011  
GPA : 9.44/10 (Ranked First in the Institute)  
*Thesis Title : A Study of Matching Problems in Graphs.*  
*Advisor: Dr. K. Muralikrishnan*

## AWARDS

PBC Scholarship for Outstanding Chinese and Indian Postdoctoral Fellows	2019
BU CS Teaching Fellow Excellence Award	2019
Penn State College of Engineering Fellowship	2014-2017
Penn State University Graduate Fellowship	2014-2015
Recipient of Springer Studentship at ICALP	2013
Ranked 6th (top 0.001 percentile) in India in Computer Science GATE	2011
Recipient of Indian Academy of Sciences Summer Research Fellowship	2010

## VISITS

<b>National Institute of Informatics, Tokyo, Japan</b>	<b>Spring 2019</b>
Host: Dr. Yuichi Yoshida	
<b>Max-Planck-Institut für Informatik, Saarbrücken</b>	<b>Summer 2013</b>

## PUBLICATIONS AND MANUSCRIPTS

(All publications have the authors listed in the alphabetical order on the last names as per the convention in theoretical computer science.)

### **Bipartite Graphs of Small Readability.**

Rayan Chikhi, Vladan Jovičić, Stefan Kratsch, Paul Medvedev, Martin Milanič, Sofya Raskhodnikova, Nithin Varma.

Elsevier *Theoretical Computer Science*.

In press, journal pre-proof, Available online July 2019.

### **Average Sensitivity of Graph Algorithms.**

Nithin Varma, Yuichi Yoshida.

Manuscript.

### **Erasures vs. Errors in Local Decoding and Property Testing.**

Sofya Raskhodnikova, Noga Ron-Zewi, Nithin Varma.

ITCS 2019: 63:1-63:21.

### **Brief Announcement: Erasure-Resilience versus Tolerance to Errors.**

Sofya Raskhodnikova, Nithin Varma.

ICALP 2018: 111:1-111:3.

### **Bipartite Graphs of Small Readability.**

Rayan Chikhi, Vladan Jovičić, Stefan Kratsch, Paul Medvedev, Martin Milanič, Sofya Raskhodnikova, Nithin Varma.

COCOON 2018: 467-479.

### **Erasure-Resilient Property Testing.**

Kashyap Dixit, Sofya Raskhodnikova, Abhradeep Thakurta, Nithin Varma.

SIAM *Journal on Computing*, 47(2):295–329, 2018.

### **Parameterized Function Property Testing.**

Ramesh Krishnan S. Pallavoor, Sofya Raskhodnikova, Nithin Varma.

ACM *Transactions of Computation Theory*, 9(4): 17:1-17:19, 2018.

### **Parameterized Function Property Testing.**

Ramesh Krishnan S. Pallavoor, Sofya Raskhodnikova, Nithin Varma.

ITCS 2017: 12:1-12:17.

### **Erasure-Resilient Property Testing.**

Kashyap Dixit, Sofya Raskhodnikova, Abhradeep Thakurta, Nithin Varma.

ICALP 2016: 91:1-91:15.

### **Small Stretch Pairwise Spanners and Approximate $D$ -preservers.**

Telikepalli Kavitha and Nithin Varma.  
*SIAM Journal of Discrete Mathematics* 29(4): 2239-2254 (2015).

**Small Stretch Pairwise Spanners.**

Telikepalli Kavitha, Nithin Varma.  
ICALP (1) 2013: 601-612.

**Rainbow connection number and connected dominating sets.**

L. Sunil Chandran, Anita Das, Deepak Rajendraprasad and Nithin Varma.  
*Journal of Graph Theory* 71(2): 206-218 (2012).

**TALKS AND POSTERS**

**Erasures vs. Errors in Local Decoding and Property Testing.**

*Talks at (1) John Hopkins University, Baltimore (2) Dartmouth College (3) UC Santa Cruz (4) ITCS 2019. Poster at ITCS 2019.*

**Erasure-Resilience Versus Tolerance to Errors.**

*Brief announcement at ICALP 2018.*

**Bipartite Graphs of Small Readability.**

*Talk at (1) COCOON 2018.*

**Erasure-Resilient Property Testing.**

*Talks at (1) MSR India, (2) IISc, Bangalore, (3) HALG 2016, (4) ICALP 2016, (5) IBM Research, TJ Watson, (6) IIT Madras, India (7) University of Michigan, Ann Arbor, (8) Northeastern University, Boston, (9) MIT, Boston.  
Posters at BU CS Day 2017, WoLa 2016, HALG 2016, MIT Sublinear Day 2015 and, DIMACS Big Data Workshop 2015.*

**Parameterized Property Testing.**

*Poster at BU CS Day 2017.*

**Small Stretch Pairwise Spanners.**

*Talks at (1) ICALP 2013, (2) TIFR Mumbai, and (3) Penn State University.*

**TEACHING**

**Teaching Assistant**

CS 530 Advanced Algorithms	BU, Fall 2018
CS 537 Randomness in Computing	BU, Spring 2018
CSE 565 Design and Analysis of Algorithms	Penn State, Fall 2016

**Guest Lectures**

CS 530 Advanced Algorithms	BU, Fall 2018
CS 537 Randomness in Computing	BU, Spring 2018
CSE 597 Approximation Algorithms	Penn State, Spring 2017

