

# Dhriti Khanna

**Research area:** Program analysis, Dynamic verification, Constraint solving

**Thesis title:** Verifying and Testing Concurrent Programs using Constraint Solver based Approaches

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[dhritikhanna.github.io](https://github.com/dhritikhanna)

## EXPERIENCE

### IIIT Delhi, India — *Teaching Assistant*

August 2015 - November 2016

Program analysis, Data Structures and Algorithms, Advanced Programming

### University of Delhi, India — *Assistant Professor*

January 2013 - April 2015

Taught undergraduate courses

### Nagarro, Gurugram, India — *Software Engineer*

July 2012 - December 2012

Worked in a team developing ERP software in .NET and Silverlight technologies

## EDUCATION

### IIIT Delhi, India — *Ph.D.*

August 2015 - Present

Advisors: Dr. Rahul Purandare, Dr. Subodh Sharma  
CGPA: 9.0

### University of Delhi, India — *M.Sc. CS*

August 2010 - July 2012

Advisors: Dr. Vasudha Bhatnagar, Dr. Sharanjit Kaur  
Percentage: 82.85

## TECHNICAL EXPOSURE

- Soot: Static analysis for Java
- SPF: Symbolic execution
- Z3: SMT Constraint solver
- ISP: Dynamic verification
- PIN: Dynamic binary instrumentation framework

## AWARDS AND ACHIEVEMENTS

**Ph.D. fellowship award** for four years by TCS Research (2016)

**Cleared national engineering aptitude test GATE** with a nationwide rank of 1356 (2015)

**Cleared National Eligibility Test for lectureship** in June 2012

## REFERENCES

### Rahul Purandare, Ph.D.

Associate Professor, IIIT Delhi  
[purandare@iiitd.ac.in](mailto:purandare@iiitd.ac.in)

### Subodh Sharma, Ph.D.

Assistant Professor, IIT Delhi  
[svs@cse.iitd.ac.in](mailto:svs@cse.iitd.ac.in)

### Vasudha Bhatnagar, Ph.D.

Associate Professor, University of Delhi  
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## PUBLICATIONS

Please see the next page.

## PUBLICATIONS

- [Dhriti Khanna](#), Rahul Purandare, and Subodh Sharma. 2021. Synthesizing Multi-threaded Tests from Sequential Traces to Detect Communication Deadlocks. To appear, **ICST'21**.
- [Dhriti Khanna](#), Rahul Purandare, Subodh Sharma. 2020. Verifying and Testing Concurrent Programs using Constraint Solver-based Approaches. In the Doctoral Symposium, **ICSME'20**.
- [Dhriti Khanna](#), Subodh Sharma, César Rodríguez, and Rahul Purandare. 2018. Dynamic Symbolic Verification of MPI Programs. In **FM'18**, 466–484.
- [Dhriti Khanna](#). 2018. Analysis and Verification of Message Passing based Parallel Programs. In the Doctoral Symposium, **FLoC'18**.
- Sukrit Kalra, Ayush Goel, [Dhriti Khanna](#), Mohan Dhawan, Subodh Sharma, and Rahul Purandare. 2016. POLLUX: safely upgrading dependent application libraries. In **FSE'16**, 290–300.