

Aviral Goel

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Research Interests

Areas Programming Languages • Software Engineering • Computer Systems • Compilers
Techniques Empirical Evaluation • Dynamic Analysis • Static Analysis

Software Skills

Languages R • C/C++ • Python • Racket
Tools Linux • Git

Education

- '17–Present **Ph.D**, Computer Science *Advised by Dr. Jan Vitek.*
Northeastern University, Boston, USA
- '16–'17 **M.S**, Computer Science GPA–4.0/4.0.
Northeastern University, Boston, USA
- '08–'12 **B.E**, Electronics and Communication Engineering 81%–First Class with Distinction.
Netaji Subhas Institute of Technology, New Delhi, India

Industry Experience

- May–Aug'19 **Oracle Austria GmbH, Linz, Austria.**
Research Assistant
- Feb–Dec'15 **Institute for Stem Cell Biology and Regenerative Medicine, Bengaluru, India.**
Technology Manager
- Sep'13–Feb'15 **National Center for Biological Sciences, Bengaluru, India.**
Programmer
- July'12–Aug'13 **Yahoo!, Bengaluru, India.**
Software Engineer
- Jun–July'10 **Siemens Limited, New Delhi, India.**
Intern

Teaching Experience

- Fall'18 **Intensive Principles of Programming Languages, CS7400.**
Ph.D. Teaching Assistant at Northeastern University
- Fall'17 **Parallel Data Processing in Map Reduce, CS6240.**
M.S. Teaching Assistant at Northeastern University
- Spring'17 **Introduction to Data Management and Processing, DS5110.**
M.S. Teaching Assistant at Northeastern University
- Summer'16 **Algorithms and Data, CS4800.**
B.S. Teaching Assistant at Northeastern University



Publications

OOPSLA'20 Designing Types for R, Empirically.

Virtual Alexi Turcotte • Aviral Goel • Filip Křikava • Jan Vitek
doi 10.1145/3428249 10.5281/zenodo.4037278



OOPSLA'19 On The Design, Implementation, and Use of Laziness in R.

Athens • Greece Aviral Goel • Jan Vitek
doi 10.1145/3360579 10.5281/zenodo.3369573



POPL'18 Correctness of Speculative Optimizations with Dynamic Deoptimization.

California • USA Olivier Flückiger • Gabriel Scherer • Ming-Ho Yee • Aviral Goel • Amal Ahmed • Jan Vitek
doi 10.1145/3158137

IGI Global **De-Noising, Clustering, Classification, and Representation of Microarray Data for Disease Diagnostics, Research Developments in Computer Vision and Image Processing: Methodologies and Applications.**

Nitin Baharadwaj • Sheena Wadhwa • Pragya Goel • Isha Sethi • Chanpreet Singh Arora
Aviral Goel • Sonika Bhatnagar • Harish Parthasarathy
doi 10.4018/978-1-4666-4558-5.ch009

Conference Talks

PL DAY'19 On The Design, Implementation, and Use of Laziness in R.

IBM • NY • USA

OOPSLA'19 On The Design, Implementation, and Use of Laziness in R.

Athens • Greece  <https://youtu.be/qLxz9HPP6wI>

META'19 Meta-Programming in Data Science

Athens • Greece

Keynote.

RIOT'19 RDT: A Dynamic Tracing Framework for R.

Toulouse • France

Invited Talks

2020 On The Design, Implementation, and Use of Laziness in R.

Harvard University, USA	Carnegie Mellon University, USA
Cornell University, USA	University of California San Diego, USA
Princeton University, USA	University of California Riverside, USA
Purdue University, USA	National University of Singapore, Singapore
University of Washington, USA	University of Colorado Boulder, USA
Northwestern University, USA	University of Maryland, USA
University of Utah, USA	University of Wisconsin-Madison, USA
Rutgers University, USA	University of Pennsylvania, USA
University of Kent, UK	

Service

REBASE'20 Organizer.

OOPSLA'20 Artifact Evaluation Committee + Session Chair.

REBASE'19 Session Chair.

SPLASH'19 Web Chair.

SPLASH'18 Web Chair.



██████████ Awards

OOPSLA'20 Distinguished Artifact Reviewer.

██████████ Languages

Hindi Native/Bilingual Proficiency
English Full Professional Proficiency

