

# ABHILASH BHANDARI

## Present address:

No.2058  
Cauvery Hostel  
IIT Madras  
Chennai-600036  
India  
Mob no: +919962613451  
e-mail id: abilash@cse.iitm.ac.in

## Permanent address:

H.No.8-11-180/227  
Vidyanagar  
Raichur-584103  
Karnataka  
India  
Mob no: +919964460229  
e-mail id: abhilash\_bhandari@yahoo.co.in

## OBJECTIVE

To be a part of a firm working in the field of compilers or program analysis and to learn about the industrial practices in these fields, thereby assimilating skills needed to meet the goals of the corporation and also to contribute towards the field.

## ACADEMICS

University/ Board	Degree	School / College	Completion	Percentage / CGPA
IIT Madras	M.S. - by research (Computer Science)	IIT Madras, Chennai	June 2015	CGPA: 9/10
	Thesis: Loop tiling in the presence of exceptions Advisor: Dr. V Krishna Nandivada			
Visvesvaraya Technological University, Belgaum	B.E. (Computer Science)	Sri Jayachamarajendra College Of Engineering (autonomous) , Mysore	2011	CGPA: 9.37/10
Karnataka Pre-University Board	10+2	SRPS Composite PU College , Raichur	2007	91.17%
Karnataka Secondary Education Board	SSLC	Infant Jesus School , Raichur	2005	90.72%

## PUBLICATIONS

- *Loop tiling in the presence of exceptions*, with Dr. V Krishna Nandivada, (to appear) in the Proceedings of 29th European Conference on Object Oriented Programming (ECOOP), 2015. (Acceptance rate = 23%)
- Semantics-preserving loop tiling in the presence of exceptions with Dr. V Krishna Nandivada. (under preparation)

## AREAS OF INTEREST

- Compiler optimizations.
  - Loop optimizations in the presence of exceptions (or any other abnormal control flow). Exceptions give a systematic and a well structured way for error handling in a program. However, they induce dependences in the programs and hence many of the traditional loop optimizations cannot be applied in their presence which may have been possible otherwise. My current research involves devising semantics preserving compiler optimizations for the code containing exception constructs.
  - High level and low level optimizations.
- Efficient program analysis in the presence of exceptions.

## COURSES UNDERTAKEN (MS)

- Advanced Compilers
- Principles of Programming Languages
- Recent Topics in Compilers
- Mathematics for Computer Science
- Parallel Computer Architecture
- Advanced Computer Architecture

## WORK EXPERIENCE

- July 15, 2012 - : Project Associate with Dr. V Krishna Nandivada, IIT Madras, Chennai.
- July 4, 2011 - July 12, 2012: Software Engineer 1 at SuccessFactors Business Solutions India Pvt., Ltd (An SAP Company), Bangalore.

## SKILLS

- Programming languages - Advanced : C, C++, Java; Intermediate : C#, SQL, Shell scripting; Novice : scheme, HTML, XML, javascript, ajax, php.
- Compilers and Tools - Advanced : GCC, GDB, Eclipse; Novice : LLVM.

## PROJECTS UNDERTAKEN

1. **FAST GLOBAL AND FAST NAIVE K-MEANS CLUSTERING USING R-TREE (B.E. Final year project)**  
K-means clustering algorithm is the most widely used clustering algorithm. The disadvantage of k-means is it does not scale well. This problem is addressed in some of the earlier works by using *KD-tree*. In this project, we have addressed the problem by using *R-tree* for improving efficiency.
2. **RED BLACK TREE**  
Implementation of a datastructure called *red black tree* (without using the sentinel node). Only Insertion is supported. Output is the *red black tree* image generated using dotty software.

## EXTRA CURRICULAR ACTIVITIES AND POSITIONS OF RESPONSIBILITY

1. Student Volunteer: 36th International Conference on Software Engineering (ICSE) 2014.
2. Organized ElDorado-An online Treasure Hunt as a part of Exebit-2013, Technical Fest of Department of Computer Science and Engineering, IIT Madras. The event spanned across three days and saw a participation of around 600 students.
3. Web-admin of PACE lab, Department of Computer Science, IIT Madras.

## AWARDS AND ACHIEVEMENTS

1. Reached Sudoku Finals at Saarang 2014, Cultural Festival of IIT Madras.
2. GATE-2012 Score : 720, 99.67 percentile, All India Rank : 514.

## REFERENCES

- **Dr. V Krishna Nandivada**, Assistant Professor - Department of Computer Science and Engineering, IIT Madras, Chennai, India (e-mail id: nvk@iitm.ac.in).
- **Mr. Prashanth NR**, Founder and CEO, Compiler Tree Technologies (e-mail id: naduthota@gmail.com).