

Maria Francis

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RESEARCH AREA My main research interests are in theoretical computer science. My doctoral research area is Algorithmic Algebra, a subfield of theoretical computer science that explores the synergy between algebra and algorithms.

RESEARCH INTERESTS Gröbner Basis Theory & Algorithms, Cryptography, Lattice Problems

PAPERS **Accepted**

1. M. Francis and A. Dukupati. “ On Reduced Gröbner basis and Macaulay-Buchberger Basis Theorem Over Noetherian Rings ”, *Journal Of Symbolic Computation*, 65:1-14, 2014.

Submitted

1. M. Francis and A. Dukupati. “ On Ideal Lattices and Gröbner Bases ”, Submitted, 2014.
2. A. Dukupati, N. Pai, M. Francis, A. Dubey. “ Generalization of Macaulay - Buchberger Basis Theorem and Border Bases over Rings”, Submitted, 2014.

EDUCATION **Indian Institute of Science**, Bangalore

Ph.D., Computer Science & Automation Aug 2011 - Present
(Joined IISc in Aug 2010 as an M.Sc (Engg) student and converted to Ph.D in Aug 2011.)

- Advisor: Dr. Ambedkar Dukupati
- CGPA: 7.0/8.0
- Courses taken: Discrete Structures, Linear Algebra, Algebra - I, Cryptography & Algorithmic Algebra

National Institute Of Technology, Calicut

B.Tech., Computer Science & Engineering Aug 2003 - May 2007

- CGPA: 9.28/10
- Ranked an overall 5th in the Bachelors degree class of 60 in CSE Dept. Also ranked 1st for the semesters 5th , 6th and 7th.

WORK EXPERIENCE **Microsoft India (R & D)**, Hyderabad

Program Manager I Aug 2007 - Sept 2009

- Being part of the MSCRM team, I was responsible for the UI design and validation of certain CRM entities. The role involved collecting requirements from the business, finalizing the design, coordinating across teams and ensuring process adherence.
- Implemented an automation framework for MS CRM User Interface (UI) testing which automated all the critical test cases. The framework was instrumental in improving the testing processes.
- Marked “**Exceeded**” in the year-end review at Microsoft and promoted in 12 months.

REFERENCES

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