

**University Address:**  
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# HRISHIKESH JOSHI

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## EDUCATION

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**Massachusetts Institute of Technology (MIT)**  
Candidate for B.S., Computer Science & Mathematics  
GPA: 4.5/5.0 • Minors in Economics & Management Science

**Cambridge, MA**  
June 2013

**Plano Senior High School**  
GPA: 4.54/4.0 • Rank 3/1402

**Plano, TX**  
June 2009

## RESEARCH EXPERIENCE

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**Laboratory for Nuclear Science, Department of Physics, MIT**  
*Undergraduate Researcher, Dark Matter Detection Group*

**Cambridge, MA**  
Jan. 2010 - Present

- Used CCD camera data, statistical analysis, and detector images to determine the sources of background alpha particle radiation in the dark matter detector
- Used UNIX operating system, LATEX, C++, Emacs, and ROOT 5.14 for data analysis

**Department of Biology, University of Texas at Dallas**  
*Research Intern*

**Richardson, TX**  
June 2008 - July 2008

- Studied crucial role of RNA editing in the mitochondrial gene expression of *Physarum Polycephalum*
- Methods used: centrifugation, gel electrophoresis, polymerase chain reaction, DNA/RNA priming, amplification techniques, southern blot, nucleotide sequencing software, etc.

**Mathematical Analysis of the Sun's Differential Rotation**  
*Independent Researcher*

**Plano, TX**  
Aug. 2004 - Mar. 2008

- Implemented novel techniques to determine the angular rotational characteristics of the sun's differential rotation using MDI images from NASA's Solar & Heliospheric Observatory

## AWARDS AND LEADERSHIP

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- North Texas Youth Honor Society, *Vice-President* (2008), *Secretary* (2007) Aug. 2006 - May 2009
- Science Skeptical Society, *Co-Founder* and *Vice-President* Aug. 2007 - May 2009

### Computer Science:

Aug. 2008 - May 2009

- Winner of 2009 Annual Hewlett-Packard Competition
- Computer Science UIL Team, *Co-President*
- UIL Programming Examinations, Ranked Top 10 in State of Texas

### Mathematics:

Aug. 2005 - Mar. 2009

- American Invitational Mathematics Examination, 2-time qualifier, Ranked 1<sup>st</sup> in School
- Interests: number theory, prime number distribution, Riemann functions, etc.

### Science Fair:

Aug. 2004 - Mar. 2008

- Texas State Science Fair, 2-time qualifier
- Grand Prize Winner of Dallas Regional Science Fair (over 500 contestants)
- Discovery Young Scientist Challenge Semi-Finalist

## SKILLS

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**Technical:** C, C++, Python, Java, ROOT, LATEX, GNU Emacs, Microsoft Windows and Office

**Foreign Languages:** Fluent in Hindi and Marathi; 5 years of study in French