Madhu Sudan

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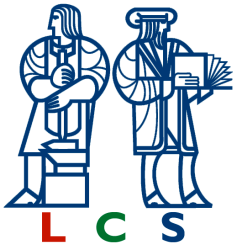

Project Overview

- **(Broadly) Algorithms & Information Theory**
- **(Focus) Algorithms for error-correction**
  - Using list-decoding
  - To correct errors in communication media
    - More errors
    - More efficiently
    - For more codes

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Progress Through December 2002

- **Locally testable codes**
  - A new definition
  - Existential results
  - Impossibility results
- **Decoding more errors**
  - Beyond the list-decoding barrier?
  - Random errors
- **Award: Sprowl Award - Guruswami Thesis**

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Research Plan for the Next Six Months

- **Pending issues:**
  - More efficient algorithms for list-decoding
  - Watermarking applications
  - Tree Codes
- **New issues:**
  - Constructions of locally testable codes.
  - Asymptotically good locally testable codes?