

Department of Computer Science and Engineering

Indian Institute of Technology Madras

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The aim of the interview process for MS candidates is to assess the knowledge and problem solving ability of the candidate in subjects that are fundamental to Computer Science and Engineering, and to assess the independent thinking ability and research aptitude of the candidate.

The interview will be conducted in two rounds.

Round 1: This round will be on one of the topics of Discrete Mathematics and C Programming. The duration of this round will be for around 15 minutes. The candidates will be shortlisted for Round 2 based on their performance in Round 1. A candidate can select to interview in at most two panels for Round 2. The panel preferences for Round 2 will be recorded during the Round 1 interviews.

Round 2: This round is panel specific. During this round, the candidate will be required to answer questions related to topics in **one subject** chosen by the candidate from the list of the subjects specific to the Panel; see the Panel specific subjects in the following page. In addition to the primary subjects chosen by the candidate, the candidate may also be required to answer some basic questions in other subjects. The duration of the interview for a candidate may be about 20 minutes. You may find [this resource](#) on how to prepare for MS-PhD interviews from one of our faculty useful.

List of topics

Panel A: Theoretical Computer Science and Related Areas

- ❖ Discrete Mathematics (Logic, Proofs, Counting and Combinatorics, Sets, Relations, and Functions)
- ❖ Graph Theory
- ❖ Theory of Computation
- ❖ Data Structures and Algorithms
- ❖ Basics of Probability
- ❖ Design and Analysis of Algorithms
- ❖ Basic Complexity Theory
- ❖ Basics of Cryptography

Panel B: Computer Systems and Related Areas

- ❖ Digital Logic Design
- ❖ Computer Organization and Architecture
- ❖ Compilers
- ❖ Operating Systems
- ❖ Computer Networks
- ❖ Database Management Systems

Panel C (AI, ML and Related Areas)

- ❖ Discrete Mathematics
- ❖ Data Structures
- ❖ Design and Analysis of Algorithms
- ❖ Linear Algebra
- ❖ Probability Theory