RESUME

VIPUL NAIK, DATE OF BIRTH APRIL 23, 1986

1. General information

Name	Vipul Naik
Date of birth	April 23, 1986
Sex	Male
Current occupation	Student (B.Sc. Math 3rd Year)
Course	B.Sc. (Hons) Mathematics
Expected date of completion	July 2007
Institution	Chennai Mathematical Institute Chennai, India

2. Contact information

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3. Academic history

3.1. **Overview.** I am currently in the third year of a three-year programme of B.Sc. (Hons) in Mathematics at the Chennai Mathematical Institute. Given below are my aggregate scores at important turning points:

Level	Year of completion	Score
Class 10 (secondary)	2002	89% (100% in mathematics)
Class 12 (senior secondary)	2004	91.4% (100% in mathematics)
B.Sc. (first four semesters)	2007	9.59/10 (CGPA)

My class rank is 2.

3.2. **Undergraduate course details.** In Chennai Mathematical Institute, a grade point is awarded in each subject out of 10. A grade of A corresponds to 10 out of 10, a grade of AB corresponds to 9 out of 10, while a grade of B corresponds to 8 out of 10.

Information about the evaluation and grading system in CMI is available at:
`http://www.cmi.ac.in//locallinks/evaluation.php`

List of courses, with instructor name and grades:

Course	Instructor	Grade
First semester		
Algebra I	K.R. Nagarajan	A
Calculus I	D.S. Nagaraj	A
Classical Mechanics	P.P. Divakaran	B
English	Shreekumar Varma	A
Programming I (Haskell)	Madhavan Mukund	A
Second semester		
Algebra II	S. Ramanan	A
Calculus II	Guest faculty	B
Discrete Mathematics	Bharat Adsul	A
Economics	Lakshmi Kumar	B
Programming II (C)	S.P. Suresh	A
Third semester		
Algebra III	K.R. Nagarajan	A
Analysis I	Amritanshu Prasad	A
Calculus III	Suresh Nayak	A
Design and Analysis of Algorithms	K.V. Subramanyam	B
Global Calculus*	S Ramanan	A
Theory of Computation+	Narayan Kumar	A
Fourth semester		
Analysis II	Suresh Nayak	A
Computer Organization	S.P.Suresh	A
Electromagnetism I	K.S. Balaji	A
Game Theory*	T. Parthasarathy	A
Topology	V. Balaji	A
Programming Language Concepts+	Madhavan Mukund	AB
Analytic Number Theory	R. Balasubramanian	audit
Computational Complexity	V. Arvind	audit
Automata, Logic, Games and Algebra	K. Narayan Kumar	audit
Fifth semester		
Algebra IV	R Sridharan	A
Elementary Differential Geometry*	C.S.Aravinda	A
Intro to Abelian varieties *	S.Ramanan	A
Ordinary Differential EquationsDE	R Srinivasan	A
Rep Finite Groups	Kannan	A

* : optional course

+ : fast-forwarded course (intended for a later semester)

3.3. **Courses being studied in the current semester.** This semester, I am crediting 4 courses and auditing 2 courses.

Course	Instructor	Compulsory/Optional
Algebra and Computation	V. Arvind	optional
Lie-theoretic methods	Alladi Sitaram, Amritanshu Prasad	optional
Optimization Techniques	T. Parthasarathi	optional
Probability	P. Vanchinathan	compulsory
Riemannian Geometry	M.K. Vemuri	optional

3.4. **Summer camps.**

(1) Summer camp at the **Institute of Mathematical Sciences**, Chennai from May 9th to June 17th, 2005. The topic was "Groups, Representations and Algebras". The instructors were Professor V.S. Sunder, Dr. K.N. Raghavan, and Dr. Amritanshu Prasad.

(2) **Microsoft Research Summer School on Algorithms, Complexity and Cryptography** from May 22nd to June 10th, 2006, at the Indian Institute of Science. The coordinators were Ramaratnam Venkatesan (Microsoft Research) and Professor Pandu Rangan (IIT Chennai). The webpage is:
`http://math.iisc.ernet.in/~imi/sacc.htm`
The list of selected candidates is available at:
`http://math.iisc.ernet.in/~imi/downloads/weblist.pdf`

(3) **Visiting Students Research Programme** at the **Tata Institute of Fundamental Research**, from June 15th to July 14th, 2006. Professor Dipendra Prasad was the coordinator and he was also my guide. I studied the paper "Lie Group Representations of Polynomial Rings" by Bertram Kostant.
The list of selected students is available at:
`http://www.math.tifr.res.in/~vsrp/selected.html`

(4) I am among three students from CMI selected for the **ENS-CMI Exchange Programme** to be held from May 2, 2007 to June 29, 2007 at Ecole Normale Superieure, Paris.

4. Other important achievements/activities/awards

4.1. **Olympiads.**

(1) I represented India at the **International Mathematical Olympiad** in 2003 held in Tokyo, Japan. I scored 23 points out of 42, the highest in the Indian team, and secured a silver medal.

(2) I represented India at the **International Mathematical Olympiad** in 2004 held in Athens, Greece. I scored 30 points out of 42, the highest in the Indian team, and secured a silver medal.
My scores in both Olympiads can be checked by searching for "Vipul Naik" (case sensitive, enter without quotes) on the IMO Compendium search page:
`http://www.imo.org.yu/index.php?options=gl|imotres&p=39v_31`

(3) I qualified the **Zonal Informatics Olympiad** 2004, a national inter-school examination where approximately 5000 students participate and 200 are selected.

(4) I was placed in the top 1% of approximately 31,000 participants for the **National Standard Examination in Physics**.

4.2. **Scholarships.** I have won the following scholarships:

- The **National Talent Search Examination** (NTSE) scholarship. I won this scholarship based on an entrance-test-cum-interview selection.
- The **Kishore Vaigyanik Protsahan Yojana** (KVPY) scholarship. This scholarship was instituted by the Department of Science and Technology, Government of India, to promote excellence in pure science. The scholarship covered all my under-graduate study expenses.

4.3. **Other school-level competitions.**

- I secured an All India Rank 10 in the Screening Test and an All India Rank 158 in the Mains of the **Joint Entrance Examination** (JEE) for the **Indian Institutes of Technology** (IITs).
- I was placed in the top ten for my class for the four consecutive years (Classes 8, 9, 10, 11) that I participated in the **National Science Olympiad**, an annual competition in which over 1500 schools participate. I secured the first rank twice.
- I represented and won prizes for my school at numerous inter-school mathematics and programming competitions.

5. Teaching experience/writing articles

5.1. **Olympiad-related training.** At the request of regional and national co-ordinators, I have taken classes training high school students for Olympiad-related mathematics.

(1) The **Association of Mathematics Teachers of India** conducted a ten-week training camp on problem-solving for the Olympiads, from August to October 2005. I gave eight lectures in the camp to students from standards 9 to 12. I also conducted lectures/problem sessions in later camps organized by AMTI.
(2) I gave **Medalist's sessions** at the International Mathematical Olympiad Training Camp, in years 2004 and 2005.
(3) I spent one day training the outgoing International Mathematical Olympiad team for 2006, at the **Pre-departure camp**. I conducted three problem sessions.

5.2. **Articles and problems.** I wrote an article on combinatorial identities that was published in *Samasya*, a mathematical problems journal.

A geometry problem I created was sent by India's Mathematical Olympiad Cell as a proposal for International Mathematical Olympiad (IMO) 2006.