

CMI-ENS student exchange programme- A report

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My classmates Amit Deshpande and Debajyoti Nandi and myself visited the *École Normale Supérieure, Paris* during May and June of 2002, under the exchange programme between *ENS* and *Chennai Mathematical Institute, Chennai*.

The duration of our trip was 8 weeks (from April 28 to June 22). *CMI* sponsored our travel expenses and *ENS* provided us with the living expenses in France. I had applied during March-April 2002 to the *ENS-international* to be able to sit for the entrance exam from the 12th to 19th of July. I thank *ENS Département de Mathématiques* for extending their invitation till the 19th of July and *CMI*, in particular *Mr. Sripathy*, for sponsoring my travel expense of return journey for the 20th July instead of the envisaged 22nd June. Both these favours were necessary so that I could sit for the exam and were granted before *ENS-international* selected my *dossier*. I am indebted to *Stéphane Fischler* and *Augustin Chaintreau* for helping me in applying to the *ENS* and in answering the innumerable questions.

I received 1020 Euros from *ENS*. I also received book grant of 300 Euros. Apart from these, I took a short course (two weeks) in *French* from *Alliance Française* sponsored by *ENS*. I was given 88 meal coupons for my lunch and dinner at the *ENS* canteen. During the first half of our stay (till May 30) our accommodation was arranged at the *ENS* guest house at 46, rue d'Ulm. Later, from June 1 to June 22 we stayed in the *ENS* guest house at Montrouge. Thanks to *Lara Morise* I got an extension to stay in the guest house at Montrouge till the 11th of July. An office with computer facilities was allotted for me in the *Département de Mathématiques* at *V6* (passage vert).

Academically, I worked under the guidance of Prof. Jacques Tilouine *Univ-Paris 13 Laboratoire Analyse, Géométrie et Applications*. I studied *Algebraic Number Theory*. I read parts of *Number Theory- Borevich and Shafarevich*, *Linear Representation of finite groups- J.P.Serre*, *Algebra- Serge Lang*. I am thankful to him for his guidance, both academic and non-academic encouragements from and for offering me lodging in his house from 1st July to 20th of July in case if I didn't manage to find an accommodation for the last 20 days of my stay.

Apart from studying on my own I attended a few lectures at *ENS* for the first-year students to learn some mathematics as well as to hear lectures in french. At the end of my stay I presented a talk based on my work here, which was titled “ *Proof of the Dedekind’s residue formulae*”

Around the 25th June I received the news that I had been selected for appearing in the *ENS-international exam* and thus afortiori I would have a lodging from the 12th to the 19th of July. I utilised the month of July for my preparation. The jury for mathematics and computer science accepted my request of conducting the exam in English, thus saving me from the difficult task of comprehending questions posed in french and reformulating replies back in french.

My friends of ENS who had participated in the exchange programme made our stay homely. The library staffs, non-academic staffs at *Pot* and *Service des élèves* at *ENS* were very supportive and I have pleasant memories of the confusions that arose and the playfulness with which they were resolved.

I can never thank as much as I would like to thank *Stéphane* for arranging this exchange programme and in helping me apply. Being a vegetarian I had no alternative but to cook my own food. It would have been difficult if *Stéphane* had not lent me his utensils and pressure cooker because in the worst case I would have had to live the last 20 days of my trip on my own expense. Finally I thank *Prof. K.R.Nagarajan* in whose teaching rigour, abstractness, sense of humour, encouragement all co-exist.