

Summer Opportunities

During the last three summers we have run the Summer Math Institute (SMI) here at Cornell. SMI is a program aimed at better preparing approximately 12 undergraduates from other institutions, particularly women and underrepresented minorities, for the rigors of beginning graduate courses in the mathematical sciences. The primary component of SMI is a rigorous analysis or algebra course. It will be algebra in 2009. There is also a (smaller) research component. We have secured long term funding from the NSF and will be running SMI for the next several summers.

There are a number of summer funding opportunities available. Brief descriptions are below:

- Algebra Instructor: The candidate will have a Ph.D. The instructor will design the course and teach class for 75 minutes a day, assign homework, and have office hours at the evening problem sessions for 10 hour per week. (The students put roughly 30 hours per week into the course.) The instructor is also expected to have a ‘presence’ in the program beyond what is described above. For example, he or she will go to dinner with outside speakers and occasionally participate in weekend outings with the students. The compensation for the eight weeks (plus a few days at the beginning) is \$15,000.
- Algebra TA: The candidate will be an expert in algebra at the level of Math 4330–4340. The responsibilities include carefully grading and commenting on the homework in a timely fashion, writing homework solutions and holding 4–6 office hours at the evening problem sessions. The TA is also expected to have a ‘presence’ as described above. The compensation for the eight weeks (plus a few days at the beginning) is \$6,000.
- Projects: The students work on their projects for 20–25 hours a week, typically in groups of 4. The job lasts the full eight weeks plus a few days at the beginning. There are two possible models for the projects:
 1. A Ph.D. will lead the projects and oversee three groups of four students. They will work with the students for roughly three hours a day, supervise practice presentations, help the students prepare posters, and have a ‘presence’ as described above. In this scenario the project leader will have a TA. The compensation is \$15,000 for the project leader and \$6,000 for the TA.
 2. The three projects will be lead by three TAs, ideally with some guidance from their advisor. The TAs will work with the students for roughly three hours per day, supervise practice presentations, help the students prepare posters, and have a ‘presence’ as described above. The compensation is \$6,000 for each TA.
- Social Activities Directors: There are two possible models
 1. Two people (grad students) organize and participate in weekend activities and outings with the SMI students. Having a car is important for these positions. These jobs also involve stocking the breakfast food for SMI students (either in

the dormitory or in CAM) and running various errands for the SMI director, such as making restaurant reservations for dinners with outside speakers, picking up outside speakers at the bus station or airport, etc. These positions pay \$1,500. The aforementioned 'presence' is required. The job will last the full eight weeks plus a few days at the beginning.

2. The responsibilities will be the same as above, but teams of 2–3 students will work for 2–3 weeks each. The salary will be prorated appropriately.

Kenneth Brown, SMI Director