

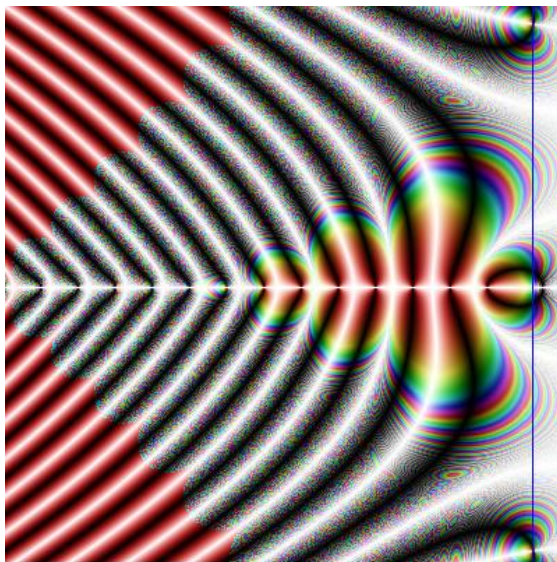
Exploring the limits of the zeta function

Interview with UNCG student Adam Boseman

Adam got paid \$3500 to participate in a NSF funded REU here at UNCG.

We'll be looking for students for summer 2010

www.uncg.edu/our/idquantreu



Adam Boseman and his mentor, Dr. Sebastian Pauli

1. How did you become interested in this project?

A friend of mine, who has done research in the past, told me I should check it out. I looked into it and the topics to research all sounded very interesting.

2. What was your project about and what was your role?

I studied the paths are formed from zeros of the function $\zeta(s)-c$, where $\zeta(s)$ is Riemann-zeta function. To begin with, I had to study some of the basic aspects of complex analysis. First, I had to get familiar with the subject. Then, Dr. Pauli and I would work through the various proofs together. We proved a right bound, and a left barrier, for $\zeta(s)-1$. We also found further zero free regions on the right, as well as regions where we know zeros will be. Once we were satisfied with a particular proof, I would type it into our paper. Also as a part of the program. I started computations on the first 100,000 paths that we were studying. Once the computations were finished, we will be able to look at a graph of the first 100,000 paths.

3. How has your involvement in the project helped you?

As I said before, I was able to get familiar with the subject of complex analysis, which is a class that I will be taking next semester. Hopefully, I have learned enough through the program to be prepared next semester. There are many new things I have learned dealing with computers too, such as working with computer algebra systems and other operating systems. Many of the skills I have learned in this program can benefit me in my future education.

4. What is the most positive part of the project? The negative?

The most positive part of the REU program has been getting to know all the people who were involved, but as far as academia goes, I like being able to experience the pleasure of learning new things just for the sake of learning, and not for a grade.

There aren't any negative things that come to mind. This is the first summer where I feel like I have actually been productive.

5. Would you participate in this program again?

Yes

6. What do you plan after you graduate?

Go to graduate school at UNCG.

