Gmail **MDS <maxieds@gmail.com>**

I got your text message

4 messages

Lacey, Michael <lacey@math.gatech.edu> Tue, Dec 21, 2021 at 8:06 AM
To: Maxie Schmidt <maxieds@gmail.com>

Maxie: I got your text messages.

Your first priority for the coming semester is to graduate. That includes finishing your incomplete courses, and preparing your thesis.

You will also have to prepare for your next position. That will potentially take up some time.

Let me know how you are doing with these things. --Michael Lacey

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Maxie Schmidt <maxieds@gmail.com> Tue, Dec 21, 2021 at 10:41 AM
To: "Lacey, Michael" <lacey@math.gatech.edu>

Michael,

I have been up all night editing my thesis draft and the next revision of the JNT article (attached). I am attaching a copy of the last section of the thesis. You should find the build up to the last conjecture (on the last page) interesting. I would start reading the document at Section 6.3 (starting on page 60) if you are short on time right now. The rest of the thesis preparation is mostly (modulo a few smaller topics to get typeset still) copyediting and LaTeX formatting. This is to say that I think the thesis document is coming along, and will be ready on time for me to graduate.

In what ways should I be preparing for my next position? I have upcoming interviews with Google and Sandia National Labs for non-postdoc reality checks in the coming weeks. I was nominated for the PIMS fellowship by the University of Manitoba. Also had a very good talk about my JNT article with Jeff Lagarias at Michigan for a couple of hours on Friday. Seeing as the NSF reviews will not be in until February so that I can start to figure out where I will actually end up postdoc-wise, what more do you think I should be doing right now?

I am not going to spend a ton of time on the DESFire security project that is the topic of my RA position for the university COVID relief funding. But I am not going to completely blow it off either... Do you have any funds for the requested hardware, or should I focus on reasoning with Sarah and Father Don while I'm home for the holidays?

Maxie
[Quoted text hidden]

LastSectionOfThesis-2021.12.21-v1.pdf
843K

Maxie Schmidt <maxieds@gmail.com> Tue, Dec 21, 2021 at 11:11 AM
To: "Lacey, Michael" <lacey@math.gatech.edu>

I forgot to attach the latest tentative JNT draft. Jeff Lagarias said he wants to start reading it today and will give me more feedback. Basically, most of the newer (since last revision) changes to the article are in the statements within Section 4.3. It is not an easy task to prove the Erdos-Kac type theorems in the first new conjecture in the section. These results should be correct, but the probabilistic model underneath one would need is tenuous to grasp/precisely define. You can check it out. Note that in addition to the thesis, this article is VERY important, as it could be the foundation for me landing a top postdoc this year.

Also, a while ago, you had a gripe about a contradiction to the theorems Vaughan communicated that are in Section 5.2. The error in translation is that the limsup-type bounds are not for |G^{-1}(x)| (the signed summatory functions, but should instead have been attributed to |G^{-1}|(x) (partial sums of the unsigned inverse function). My bad, I guess.

Maxie
[Quoted text hidden]

mertens-lower-bounds-2021.12.21-v1.pdf
634K

Maxie Schmidt <maxieds@gmail.com> Tue, Dec 21, 2021 at 11:14 AM
To: "Lacey, Michael" <lacey@math.gatech.edu>

The second statement in Corollary 4.8 is particularly nice because it implies that for large x, |g^{-1}(n)| is almost always smack at its average order (which I compute in Section 4.2). This puts that unsigned function's behavior on the map with \omega(n),\Omega(n) that have the results (cf. Section 2.3) showing how regularly centered near their average orders those two strongly (completely, respectively) additive functions are. This suggests very special things about the distribution underneath.

Maxie
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