Log on thesis papers PhL 3/26/15

March 25, 2015

While pondering Researchgate, it occurred to me that my Ph.D. thesis papers (two of them) are pretty good pieces of work in a field which was dying while I wrote them (S matrix theory) but the underlying math and kinematics have not died and might be useful to someone doing other things. These unpublished papers are:

LBL-5527 Oct 11, 1976 "convolution"
The Generalized-Legendre Addition Theorems, SU(1,1), and the Diagonalization of Convolution Equations

LBL-6199 Nov 15, 1977 [Ph.D. thesis] "ring"
Multiperipheral Ring Dynamics and a Definition of the Complete Twisted Reggeon Loop

I was a amazed to find about 7 hits on the thesis paper, mostly from UCB and their high-energy databases. One of the hits actually has full text of my thesis,

http://escholarship.org/uc/item/8x56v89t

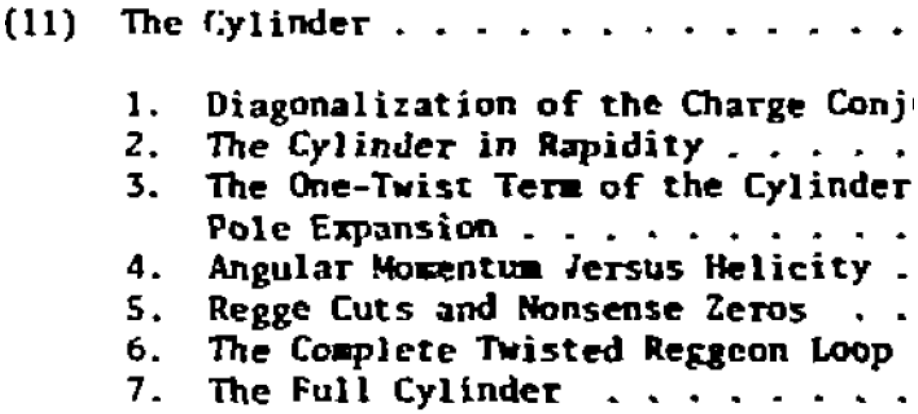
I was unhappy that the scan quality was very low, on the first page PhD Thesis is partially obscured for example. The thing is one page at a time, whereas the LBL report is 2-up. Maybe they build a simple machine to scan LBL reports?? Here is one of the references,

Multiperipheral Ring Dynamics and a Definition of the Complete Twisted Reggeon Loop
Philip Harrison Lucht (LBL, Berkeley)
Nov 1977 - 124 pages
LBL-6199, UMI-79-04529

I was able to grab the abstract from this copy, but I had to edit out a lot of OCR errors:

The $t < 0$ multiperipheral formalism of Ciafaloni, DeTar, Misheloff, Mueller, Muzinich and Yesian is reviewed, extended, and applied to the ordered S-matrix whose ring amplitudes comprise the zeroth level of the topological expansion. Toller M-function notation is used throughout. The bootstrap and cylinder problems are formulated in terms of a well-defined helicity pole propagator; a definition of the complete twisted Reggeon loop, which appears in the one-twist term of the cylinder, is given as a helicity pole expansion. Some consideration is given to the following subjects: diagonalization, naturality, threshold behavior, Regge cuts, and complex helicity.

I don't know why the PDF is so bad looking, here is an example



Question: Is my other document on line or not? Answer: Four hits on LBL's inspire thing, no full text.

Stores. I went first to **Staples** and they have a flat bed scanner only and want 50c/page and then will only do it 2-up as I have it. Then to **Office Depot** and talked there to **Ryan George**. They have a fancy Xerox machine and can run the whole thing through at 25c/page in the same 2-up and you get a PDF and they put it on your own flash drive. That would be 50+20 = 70 pages. The first 50 pages have 2 LBL pages per physical page, the last 20 pages are singles, so his charge would be 70 pages times .25 = 70/4 =17.50 + tax, more or less. That is not too bad. The other doc LBL 5527 would be similar in cost.

It suddenly occurs to me that I might have the **original manuscripts**. I do!!!

Just checked the 6199, went through every page, added back in page 98 and the cover page which I must have changed when I tried for publication. so I have the exact original in full in a new folder. I can march down and do this in 10 minutes at Office Max for 124/4 = 31.00. Think how many years went into that!

What does **FedEx Kinko's** have to say? 30 to 89 cents a page.

> **Sidenote #1:** I learned today that **OfficeMax** and **Office Depot** merged on **11/5/13**, a year and a half ago, I didn't even know. The merged company is named Office Depot. The store on 4th S was OfficeMax, the one on 21st S was Office Depot. Presumably this lets them do better against Staples and Amazon for office staples and electronics products. Then today I see that **Staples** is wants buy this new Office Depot for 6.3 B and is likely to get US approval 65%. "Staples has itself been investing actively in its e-commerce operations, and with more than $10 billion in sales it ranked as the third-largest online player in 2013 after Amazon and Apple, according to Internet Retailer."
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> **Sidenote #2**. I learned that FedEx Corp. acquired privately held Kinko's, Inc. in **February 2004** and rebranded it FedEx Kinko's. The acquisition was made to expand FedEx's retail access to the general public. After the acquisition, all FedEx Kinko's locations exclusively offered only FedEx shipping.[6] In June **2008, FedEx announced that they would be dropping the Kinko's name** from their ship centers; FedEx Kinko's would now be called **FedEx Office.**[7][8]

Decision: Go to Office Max and do both docs. // Did this, bill was $70 for 264 pages, the result looks good on their PC. He set not quite super dark so no background noise. Did a few test sheets first. Ryan

George who manages some of the store, his boss also nice, got my car **unbooted**. The are trying to boost sales from this ancient store.

I went through the convolution PDF and rotated one picture so much easier to understand. Read a lot of it, still think it is pretty good and might just be useful to someone in some field. You don't get OCR for your $70 at Office Depot so I will give that a shot right now. I don't know how Xchange OCR compares with Adobe Acrobat and I don't know whether it creates an index or not, I will have to do a speed test. // It is plenty fast on search. Added title and my name in properties. Size is 7.8 MB which is not bad given that it is very high resolution. Resolution is very, very good I think.

Now what about that other paper on the Q functions? First I run into this,

The Su(1,1) Addition Theorems And Their Use In Diagonalizing Integral Equations

Philip Lucht (LBL, Berkeley)

Jun 1978 - 42 pages

Submitted to: J.Math.Phys.
LBL-7910

This was the "short version" that was not accepted for publication in about 4 journals I tried for (see folder on that subject). I probably have a hard copy somewhere (I do) . I don't care about this paper, I care about my full paper really, and it is done above.

Now let's take a look at 5527 and rotate pages as needed.

Experiment: I have Ring loaded on Alta and I am doing OCR there in Acrobat 8. Web suggests that they deskew each page as part of this process (deskew is the tech term for the fact that some pages are slightly rotated due to the copier paper handling). The last page is especially bad. I think it is working. The process is very slow on Alta as one might imagine, so I will just let it run. You see each page "deskew" right after processing OCR is done on that page. This would be great if it works.

Status: I have processed ring on Alta: OCR + deskew + embed index. I moved it back to Black and I think the skewing is better, but the file seems slower to view. While convolution is processing on Alta, I will browse through ring just for run to see how it looks in general. The last page seems nicely deskewed at least.

I have processed both files on Alta and have the results back. Tomorrow I will do a final release of all this stuff.

Update March 26, 2015

Created this doc and found a home for my thesis papers and related docs (physics/thesis papers).

What about paper titles for Xmission release? Am I allowed to have parentheses in a title? I guess I will just try and see what happens. At least Windows 7 allows parens and commas in a title, but not sure what web will have to say.

So I put title and name in properties of both docs. I think I did OCR index for both docs in Alta Acro.

Let's now move PDF copies to my local web area. Done.
Now add them to the index html file. Did this just for convolution, the earlier paper, and will see if that flies. OK on the local site, so now do the other paper the same way.

Things seem OK on the local site, OCR works on both files, let's now try the xmission upload.

OK, both papers are up, no problems with paper names, did not use last update phrase, downloaded both and checked OCR, this is done! Now I can put them on Researchgate as well.