



ReNeNews

|| July 2012 ||

Newsletter of Research Scholars





editorial

New admissions taken place, fresh faces beaming around the whole place, hope and enthusiasm dancing everywhere, hundred questions in the minds of new scholars being answered or probably not answered by other scholars! This place is happening!

Even ReNews has many reasons to cheer about! I am very happy to be writing the Editorial note at this time, as the enthusiasm is infectious and for many more reasons which you will understand as you read on.

Firstly this issue has for the first time two contributions from the research scholars. It instilled hope in me to see more contributions from the scholars in the future.

One more reason to cheer about is that all the issues of ReNews has been uploaded and will be uploaded in the official website of T5E, under independent publications. The direct link is <http://students.iitm.ac.in/thefifthestate/links/renews/>. Now, you can access any issue of ReNews anytime, from anywhere.

When I wanted to launch ReNews, I was really skeptical about the whole idea. The whole idea behind launching this Newsletter was to provide a platform for scholars to share the News. I am glad that it growing beyond just News. It is growing in terms of number of people associated with it both directly and indirectly. I want to see it run independent and not die down with me now! In this direction, this will be my last editorial. I am completely handing it over to our new editor Oswald Jason Lobo and will just take up the post of over viewing this initiative. Scholars have started coming ahead to be correspondents and now we have a new designer for the ReNews, Aneesh Prabhakar, to take care of ReNews.

Before signing off, this issue contains, apart from the contribution from the scholars, procedure to apply for HRA by a scholar getting HTRA, skeleton of another new initiative (Research Guidance Cell) for which I badly need your advice and support. Also, I would like to invite the new research scholars to be a part of the ReNews and also invite articles from them on their new experience, which we will put under newbie's column.

Wishing the new team all the very best for the ReNEWS....





Orientation Program for New Research Scholars

25/07/2012

A orientation program was organized for the new research scholars of our campus. It was an ice-breaking session meant to give an introduction to the life ahead in the campus. Prof. K Krishnaiaha (Dean, Research) gave the introductory speech and introduced the speakers for the evening. This was followed by a brief presentation by Ishitha (RAS) about what the facilities available for research scholars during their course of stay in institute.

Prof. L S Ganesh (Dean, Students) gave a talk on "Opportunities and Facilities to Develop Yourself". Prof. LSG gave an account of his life as a student and as a scholar in IITM during the late 70's and early 80's. His talk was filled with anecdotes of his life in the institute which held the entire audience in rapt attention. He recounted the numerous things that he did while at the same time focusing on the primary goal of research.

Prof. M P Maiya (Chairman, Council of Wardens) gave a talk on the life in hostels at IITM. Prof. Maiya told that currently there is an accommodation problem in the institute and the hostel management is trying its best to manage things. He told that problems on the boys' side will be resolved soon while those on the girls' side might take some time. He wished that all will have a pleasant and memorable stay in the hostels. He also advised against the use of prohibited substances. He also urged the students to come and volunteer in the hostel activities and other activists in campus.

Prof. M S Sivakumar (Mitr) also spoke about his experience as a student in IITM. He mentioned about the effective utilization of time and the knowledge gained during the course of stay here.

Research Guidance Cell

06/07/2012

This is the new initiative which I want to work on. This initiative has got its foundation and the present form only because of the never dying fight put up by a research scholar, Aravind from Electrical Engineering Department.

Research guidance cell is meant to help research scholars solve their problems. There are counseling units like MITR and GCU in our campus which are very active and doing a great job. The motivation behind the cell is to form a team which can solve problems related to research scholars, of which counseling is one part. The first step of the cell is to establish one!! The initial ideas that are there are given below which can be modified and developed with discussion with research communities and debate within research guidance team,

- 1. Guide student issues.*
- 2. Financial problems.*
- 3. Facilities for research.*
- 4. Academic issues.*
- 5. Depression, psychological problems.*
- 6. Placement related issues.*
- 7. Helping out new research scholars joining IITM.*
- 8. Full fledged Mentoring Programme through IITMAA.*

The first step of this cell is to bring together a bunch of enthusiastic minds ready to help research scholars with their problems. The major works involved in the team are as follows,

- 1. Website designing and maintenance.*
- 2. Person to sort out the registered complaints/mails under this cell into various categories*
- 3. Phone number available for research scholars 24x7.*
- 4. Public relations person - a contact point for everyone.*
- 5. Individual Persons to deal with each category.*

These are few points that have come out through initial discussion with few people, but this can and should be taken ahead and developed further, through discussions and debate. But as said before, the team must be formed and developed. The basic motivation behind all these is to provide a good, conductive and nourishing environment for enthusiastic research minds in our campus, by taking care of these Beautiful Minds!!

If any of you are interested in joining this activity or has feedback, please send your valuable views to this email id – ras@smail.iitm.ac.in.



HRA for married research scholars

03/07/2012

During the meeting of Research Affairs Secretary with the scholars on the stipend issue, the major topic of discussion was the HRA issue. The major concern of the scholars who were married and staying outside the institute, because they could not get accommodation in the quaters on campus, was that the major portion of their stipend was being spent on paying high rent. They demanded that they atleast be paid HRA till they are alloted the quaters. It came to light the one person had appiled for HRA and actually got it!

In follow up with this RAS spoke to Prof. Krishnaiha (Dean, Research) and Prof. Sriram (Dean, Administration). Both of them have approved HRA for the Married Research Scholars! The following is the [Procedure and conditions for getting the HRA](#);

- 1) The scholar is eligible for HRA only if institute is not able to provide them accommodation on campus.*
- 2) He/she Should have already applied for the quaters in the estate section of administrative building.*
- 3) The waiting list of all the scholars who are yet to get the quaters is already with the estate section. This list will be sent to the administrative section and HRA (30% of stipend) will be credited along with the stipend from this month of August. There is nothing that the the scholar has to do now.*
- 4) For those who are yet to apply for qutaers. New forms are being drafted. As and when the form is ready, the scholars will be informed.*
- 5) Also a new provision will be made available wherin one will be able to choose weather he wants accomodation in the institute or not. Also one will be able to give a preference if he only wants a higher class quaters and is willing to wait for it.*

Talk on Intellectual Property Rights

06/07/2012

Shri C. Srikanth practicing associate in the office of Smt. K.Parameshwari, Senior Panel Counsel for Central Government gave a talk on Intellectual Property Rights. He has graduated from IIT Kharagpur in three-year LLB program (2006-09) with specialization in Intellectual Property Law and from Sakthi Mariamman Engineering College, Anna University (2002-06) in Electronics and Communication Engineering. He is representing civil, criminal, service and IPR matters before Madras High Court, Central Administrative Tribunal (C.A.T.), City Civil Court, Magistrate Courts, District Consumer Forum, State Consumer Commission, Intellectual Property Office (IPO), Chennai and advising start-up companies on legal, IPR issues. He also Worked as an Associate in a law firm in Mumbai attending various IPR matters like Patents, Trademarks, Design, Copyright, issues involving Copyright and Trademarks in Cyberspace and issues related to Information Technology. In Patents, he conducted prior-art search, drafted patents, filed, prosecuted and responded to Office action of Patents before Intellectual Property Office (India), Intellectual Property Appellate Board (IPAB), European Patent Office, US Patent and Trademark Office and WIPO. In Trademark, he filed Trademark application, prosecution before Trademark Registry and assisted litigation related to Trademark matters before Bombay High Court and Delhi High Court. His practice also included industrial design and trademark filing and prosecution.

He spoke about IPR in Indian context and covered patents, trademarks, copyrights, designs, geographical indication, semiconductors and IC layout, plant variety protection under it. He gave a basic idea on what is a patent, how to go about patenting and various advantages of patenting. He also gave a brief idea on all the other topics of his discussion. Overall the talk was receptive and helped all those who wanted to know about IPR.

Coming out of your Cocoon.

Aravind
Research Scholar, Electrical Engineering Department

I once had an opportunity to go abroad as part of my research work. During this time I observed a very curious and interesting thing about Indians staying there. These Indians stayed and mingled only with Indians!!, they had groups, with whom they go out, eat, stay and what not.

There were a few exceptions though, which included me. I made it a point not to join these groups, I literally ran away from these groups. This is not because I don't like Indians or India, I wanted to know the culture of other countries and other people across the globe, even though I was honestly missing my country, the food and really wanted to talk to these Indians. But I didn't.

I made it a point to eat the food available naturally at that place. It was a bit difficult, but an intelligent choice. I got to eat lot of new stuff, of which some where really nice. I mingled with Chinese, Cubans, Italians, Mexicans, Afghans, Iranians, Kiwi, Irish, Montenegrin (search in Google!!). I came to know a little bit about their culture, climate, food habits, and lot of nice interesting stuffs. It was very nice and interesting. I learned to use fork and knife, after making an idiot of myself, I humbly admitted to my European lab mates that I don't know how to use them and they taught me patiently, see!! So these are the positives of going out of your comfort zone and believe me it is very rewarding.

We research scholars are not at all social!!, that's a pardonable mistake!! But, how many times will you get an opportunity to eat with Spanish, French or a Montenegrin guy? This is more visible when you go out of India, but we must admit the fact that there are such groups within our campus itself. What I am saying in short is that, if you get an opportunity to go out and get to meet different people, like in our campus, mingle with people. Don't limit yourself to your small cocoon. It is very comfortable, agreed, but least rewarding.

My Experience

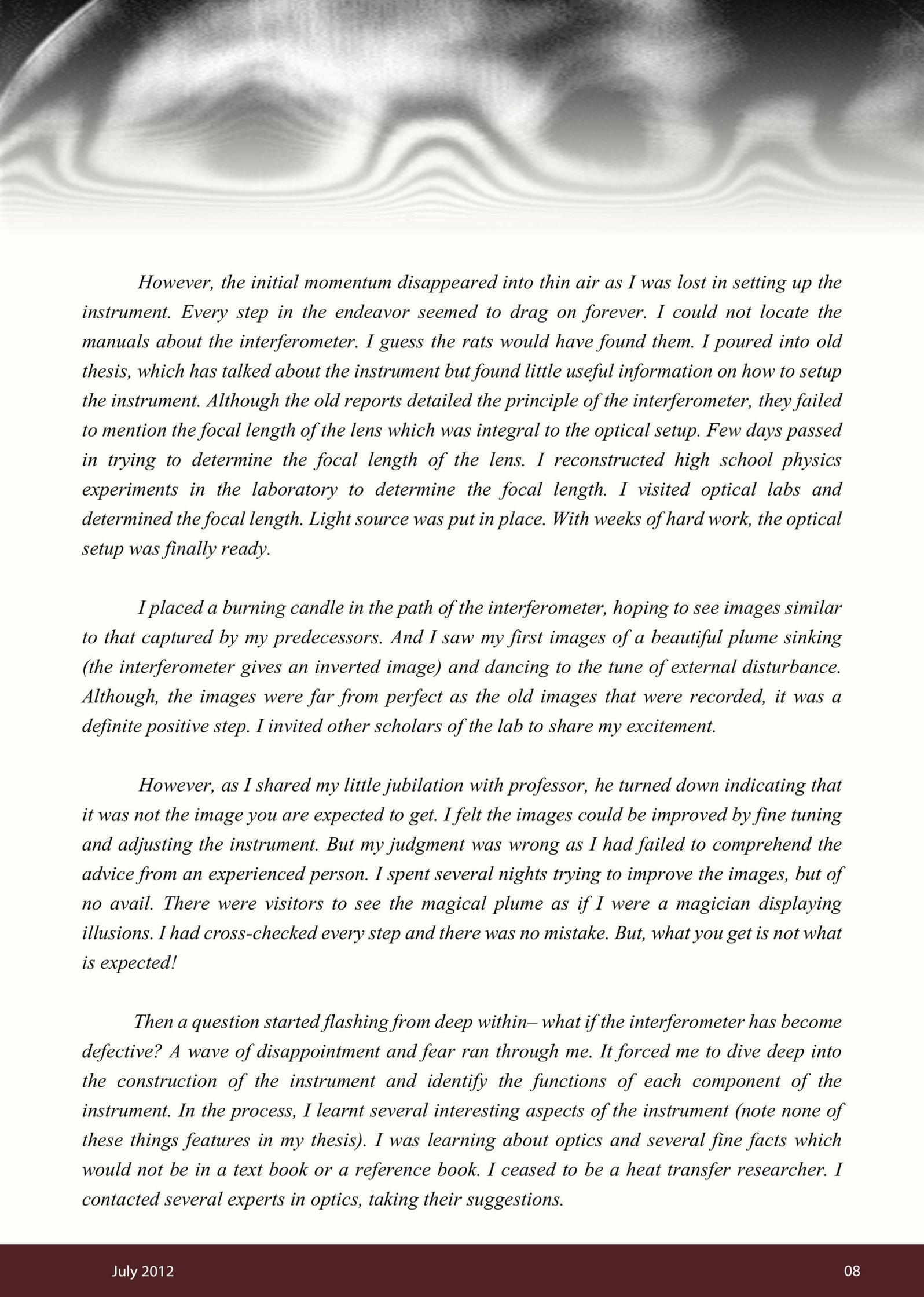
Prasanna S
Research Scholar, Heat Transfer & Thermal Power Lab

Writing thesis makes me realize that the contents of the thesis account for only a small fraction of the energy burned over the last four years. Thermodynamics would say my efficiency is poor and economics indicates I would be poor at business ventures. But in reality, these untold memoirs are what my PhD is all about and lay the foundation for my career. I wonder how a thesis hardly unfolds the real story. Every thesis has a hidden story to tell.

My research journey has been peppered with lot of accidents and excitements and my start was no better. I was supposed to continue investigations on my M.Tech problem. Masters project being a numerical work, I wanted to concentrate on experiments. I was fascinated by the world of flow visualization and wanted to apply these methods to my experiments. But I knew that visualization methods were far more expensive than the lab funds. However, I did not rest and pursued my interest in learning about different methods and see if there were methods which could be employed easily with the available resources.

Looking at his student drifting away from the original problem in hand and realizing the student's interest, my research advisor stepped in. He indicated to me of an old instrument, a differential interferometer, lying in the instruments room of our lab. Apparently, the instruments room in our lab is used for storing unused and unusable equipments, a dump yard in real sense. The instrument was used for visualization of flow field and can measure temperature derivatives. However, the instrument was beyond its prime and did not give the desired output. It lay unattended in the store room for almost a decade. I expressed desire to repair the instrument and my advisor assured me of help. I was entering an unknown territory without any clear set of goals and also met with some warnings, advices from well wishers. But there was something burning beneath which made me pursue my destiny.

The challenge itself was more daunting than I had imagined. Firstly, a suitable location for the adventure had to be identified. Unfortunately, then there was no space on the lab floor. So we identified the lab workshop as an alternative. The workshop was unused for almost 20 years and was used as a dump yard. (I wonder how ineffective the lab space was used) I took upon myself, with some help from lab technician, to get the workshop cleaned, removing all the filth and creating enough space for the setup. With some carpenters, a small enclosure was constructed to protect the optical instrument from dust and light. All this transpired within a month and stars appeared to be on my side.

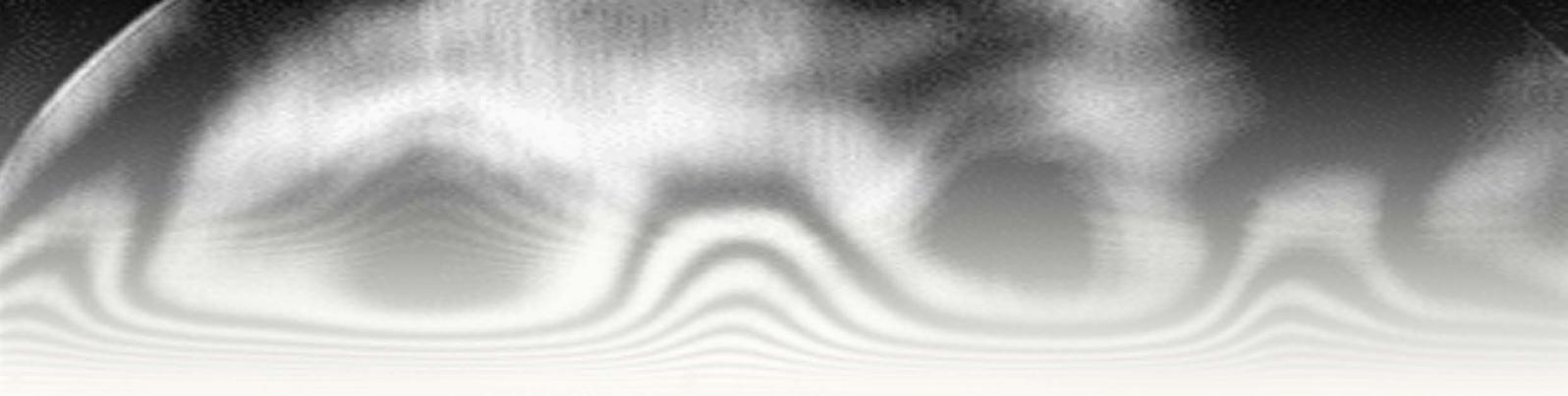


However, the initial momentum disappeared into thin air as I was lost in setting up the instrument. Every step in the endeavor seemed to drag on forever. I could not locate the manuals about the interferometer. I guess the rats would have found them. I poured into old thesis, which has talked about the instrument but found little useful information on how to setup the instrument. Although the old reports detailed the principle of the interferometer, they failed to mention the focal length of the lens which was integral to the optical setup. Few days passed in trying to determine the focal length of the lens. I reconstructed high school physics experiments in the laboratory to determine the focal length. I visited optical labs and determined the focal length. Light source was put in place. With weeks of hard work, the optical setup was finally ready.

I placed a burning candle in the path of the interferometer, hoping to see images similar to that captured by my predecessors. And I saw my first images of a beautiful plume sinking (the interferometer gives an inverted image) and dancing to the tune of external disturbance. Although, the images were far from perfect as the old images that were recorded, it was a definite positive step. I invited other scholars of the lab to share my excitement.

However, as I shared my little jubilation with professor, he turned down indicating that it was not the image you are expected to get. I felt the images could be improved by fine tuning and adjusting the instrument. But my judgment was wrong as I had failed to comprehend the advice from an experienced person. I spent several nights trying to improve the images, but of no avail. There were visitors to see the magical plume as if I were a magician displaying illusions. I had cross-checked every step and there was no mistake. But, what you get is not what is expected!

Then a question started flashing from deep within— what if the interferometer has become defective? A wave of disappointment and fear ran through me. It forced me to dive deep into the construction of the instrument and identify the functions of each component of the instrument. In the process, I learnt several interesting aspects of the instrument (note none of these things features in my thesis). I was learning about optics and several fine facts which would not be in a text book or a reference book. I ceased to be a heat transfer researcher. I contacted several experts in optics, taking their suggestions.



It was then we identified the problem with the instrument. A small component called polarizer was beyond repair and needed replacement. We immediately placed an order for the component and replaced the polarizer. A small modification to the original setup had to be done to accommodate the new polarizer. And then we saw clear images of the plume dancing to the tune of external disturbance and on par with the images recorded by my seniors. After all the interferometer required a new polarizer whose cost was about Rs. 900. My pursuit started around August 2008 and I captured my first successful images in the month of January 2009, about 6 months.

I developed a deep understanding of interferometry. My new found knowledge changed the course of my research and brought in new dimensions, leaving behind what I intended to do. I continued to learn more about optics and radiative heat transfer (which is what my thesis is about) in the following three years and have sufficient material to write a thesis. But without the initial few days of struggle I may not have been able to produce the thesis.

In the end, my thesis would be read only by my guide, reviewers and some juniors in the lab treading my line of research. The thesis itself would explore only a small aspect of a large problem. I realize that thesis is not about producing papers or solving problems but about learning and exploring new dimensions, developing skills and truly understanding the philosophy of research. Another person can read my thesis and understand the work I have done, but he will never be able to feel or experience the struggles, excitement, despair, fear, hard work and satisfaction that have gone into the thesis. Every thesis is a testament to the candidates effort in pursuit of knowledge.



ReNews

Coverpage courtesy

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