

Souvenir

2020



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PhD Alumni Meet,
September 19-20



Department of Mathematics

INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

Souvenir Committee



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Message from the Head of the Department

Alumni are multi-faceted facilitators as they act as mentors, advisers and inspirations for the current and upcoming students. Thank you for enabling your Alma Mater to reach greater heights through your talents and accomplishments. I am sure that the learning experience rendered by this Institute must have played a role in deriving meaning in both your domestic and professional fronts. This is my request to you to stay connected with the Department and contribute to its continuous development. This symposium intends to embark the beginning of our relationship building to enhance interaction between us on a regular basis which may play a pivotal role in updating and benchmarking the academic policies, procedures and practices world-wide. With your expertise, you can contribute in periodically reviewing and developing the existing programmes as well as initiating new programmes of global standards.



M. Guru Prem Prasad

Through this symposium, we aim at mutual sharing of knowledge which can lead to research collaboration with the current students. It will be appreciated and appropriate if the research pursuits focus on adapting to the 'new normal' owing to this COVID-19 phase.

We are keen to organize a face-to-face alumni meet in the coming summer so that we can nurture the relationship. Visit us with your family to revisit your memories associated with this institute.

Recently, the Alumni & External Relations Section has launched the Alumni Portal <https://iitgaa.org> to execute alumni activities in a meticulous manner. Your participation is appreciated.

Wishing you the best of luck in all your future endeavors. Stay socially distanced and digitally connected.

[Prof. Prasad is a Professor and the Head of the Department of Mathematics at IIT Guwahati.]

Editor's Musings



Swaroop Nandan Bora

I have stopped a number of times while writing what is kind of an editorial; it is probably much easier to write something which is purely academic. Going down the memory lane, it has been more than 21 years and 8 months since I joined this department as a faculty member. In other words, I know each and every graduated research scholar of the department – which can be claimed by only very few of my colleagues. During this period, it is not an exaggeration when I say that the life without the research scholars would have been like scoring a century without a four or a six. The contribution that they have made to the academic development is not less than that of the faculty members, if not more. Beginning with Shreemayee, Jiten and Shabeena (2002) to Debasish, Devanand, Sonjoy and Biswajit (2020), every research scholar has made us proud with his/her achievements. They have formed a big part of our family - the department – which is deeply stored in the memory.

When a research scholar gets enrolled for a PhD programme, it is not just about doing research in his/ her field and completing it with some significant publications. It is also the time when one imbibes in himself/herself a lot of other qualities which are going to stand in good stead in his/her later life. The success lies in picking up every possible good quality of a faculty member, not just the supervisor. It is the best period when one can learn about responsibility, sincerity, punctuality, diligence etc.

Add to it 'passion' – without which one probably cannot dream, and without a dream, one probably cannot succeed in the actual sense. It is also an equally important responsibility of a faculty member to impart those in research scholars, most of whom are going to be a teacher one day. An important quality that has to be cultivated, if not grasped by now, is to stay focused even during times of adversity and keeping oneself cool-headed. This will win half the battle. In one's life, every occasion cannot be expected to be a favorable one. How to fight it out and win the battle is something that has more weightage than an uneventful life without struggle. In this world of uncertainty, one needs to prepare himself/herself to face the situation as it comes and take it in its stride. Whether we like it or not, we must accept that life is hard and like a battlefield, and we need to fight every single day of our lives. We have to accept and realize this hard truth. I truly believe in the idiom 'Failure is the pillar of success'. It is probably true that one thrives harder if he/she faces failure in some form or other. Many inventions would not have seen the light of day if some people would not have failed, sometimes multiple times. Failure is more inspiring than success since it ignites you to work harder, whereas immediate success may make you complacent. At the same time, we need to be conscious of what 'success' means to society. Success has no meaning unless it has value for others.

At a personal level, I feel that we (faculty and research scholars) have a very strong bond amongst us – which is expected to last forever. Any achievement by a department research scholar, even a post-PhD one, brings us as much happiness and pride as it would have, if it was a family member. Research scholars are the backbone of any department – their success brings the department to a higher level and a better visible status. I strongly feel that I am no one without the contribution made by those who have completed and those who are doing PhD under my supervision. It is probably true for every faculty member of the department. An alumnus has more responsibility than a current student since he/she carries with him/her the weight and stamp of the institute and the department.

Other than research and teaching help, there have been many joyous occasions spent together by the department faculty and research scholars. A regular yearly picnic (we have missed it only twice, as far as I remember) is the main occasion when we all come together. A picnic without research scholars would be like a birthday celebration without children. Our research scholars have always come forward with all their might whenever we have organized any conference, symposium and workshop - their help was indispensable. ASMC2020 is a great occasion for all of us to look back and share our achievements and feelings, and may be some shortcomings as well. Let us consider this to be the beginning of a new paradigm of staying together and sharing our feelings and success. It is an impetus provided to all department PhD alumni to come forward for this symposium in the Silver Jubilee year of the Institute, which has given so much to all of us, faculty and research scholar alike, and it is the duty of everyone to

make it a grand success. It will also pave the way for the current research scholars to know their peers, what they have achieved and how intensely they are still attached to the alma mater. Of course, it would have been more effective had we been able to organize it with the physical presence of all. At the same time, it is easier for everyone to be present virtually since that does not need much time and planning. Let us all make this virtual occasion a grand success and vow to make it a regular event and conduct it physically when the situation eases. It has been an altogether new (and enjoyable) experience for me to have worked for the publication of an e-souvenir befitting the occasion. It would be unfair if I do not put on record the cooperation extended by the other members of the souvenir committee – Shreemayee, Bhupen, Himadri, Dishari, Punit and Sunanda – without whom I would have certainly felt disadvantaged. In addition, I need to offer special thanks to Himadri and Punit for handling the assignment 'almost' professionally – it is simply amazing the way they have designed and typeset the souvenir. As the Chief Editor, I own responsibility for any error or discrepancy that may have crept in (though unintentionally). If the souvenir is considered a success, the credit goes to all the members. We have tried our best to give space to everyone's write-up, with only minor editing without touching the main content and feeling. We thank every alumnus for his/her contribution with the hope that the rest will come forward next time. We are overwhelmed by the response received – more than what was expected. I have some special words of appreciation to three current research scholars – Rakesh, Somnath and Shamik- who have given a new dimension to this souvenir by recalling their pleasant association with their seniors-cum-mentors. I

specifically thank Dr. Meenaxi Barkataki Ruscheweyh, first permanent faculty member of the department and ex-HOD, for accepting my request and penning down a fabulous article which will inspire all alumni, Prof. Rafikul Alam for writing an obituary with a personal touch in remembering Prof. Pradipeswar Bhattacharya, first HOD and Prof. MGP Prasad, current HOD, for his write-up which will keep our alumni motivated and focused.

I wish every alumnus a very bright, happy and successful academic, social and family life. Keep in mind that your success makes us feel as if it is our success and your achievement makes every one of the department fraternity proud. Till next time, I sign off with the following quotes:

Success is not final; failure is not fatal: It is the courage to continue that counts.

--Winston S. Churchill

Try not to become a man of success. Rather become a man of value.

--Albert Einstein

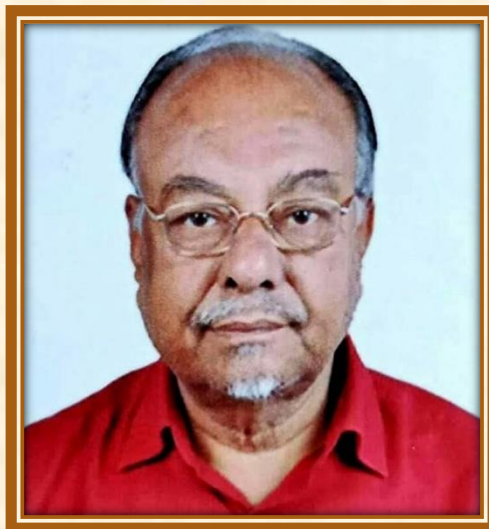
[Prof. Bora is a Professor and former HOD of Mathematics, at IIT Guwahati.]

Professor Pradipeswar Bhattacharayya - A tribute

Never judge a man on the basis of his appearance and personal conduct. I learnt this lesson early in my career at IIT Guwahati when I first met Professor Pradipeswar Bhattacharayya – PB to his colleagues - in 1996. He was the founder Head of the Department of Mathematics at IIT Guwahati and also the first Dean of Academic Affairs. He was a towering figure and a stylish man who was noticed by all for his dynamism and exuberance.

My first impression of PB was of a man who was overbearing and intimidating. This impression, however, did not last long. His behavior towards me was affectionate and somewhat paternalistic. He played a big role in shaping my early career at IIT Guwahati. To me, he was a benevolent mentor.

When I joined IIT Guwahati in 1996, I was young – a few days short of 28 years - and inexperienced. The day before my first lecture at IIT Guwahati, PB called me for a small talk in his office. He advised me to take teaching seriously and gave me tips on delivering a good lecture. He told



Professor Pradipeswar Bhattacharayya:
Picture taken from the internet

Rafikul Alam



me that he would attend my first lecture the next day morning. Of course, he did not turn up for the lecture but it was a subtle message that I should take his advice seriously. A few months later, a senior colleague told me that PB was proud of me. His advice to take teaching seriously served me well.

When he joined IIT Guwahati, PB was on lien from IIT Madras and his last PhD student was on the verge of

submitting his thesis. A few months later, his student came to IIT Guwahati to discuss and finalize the thesis for submission to IIT Madras. He assigned the student to me and asked me to help the student to finalize the thesis. I took the assignment seriously and ended up suggesting lots of changes in the thesis, which were duly incorporated. Once the student left for IIT Madras, PB told me that he appreciated my help in finalizing the thesis and he liked my style of presentation. I came to know later that the student came to IIT Guwahati with the final version of the thesis, which PB wanted me to proofread. But I ended up revising the thesis! However, instead of showing his displeasure for unwittingly overruling him and revising the thesis, he complimented me for my expertise.

In early 1996, IIT Guwahati was at a nascent stage and, in many cases, the arrangements were ad hoc. As the Dean of Academic Affairs, PB took it upon himself to streamline academic matters. He prepared Ordinances and Regulations for MTech and PhD programs. He was instrumental in starting the PhD program at IIT Guwahati from the academic year 1996-97. This helped young faculty members to take PhD students and carry out research work while actively contributing to the development of the Institute. His emphasis on research made it clear that contributions to the development of department and the Institute at the expense of research will not be appreciated. It was a good reality check, which helped us not to lose focus.

Although, PB did not stay at IIT Guwahati for long enough, he left his mark as an administrator. In those days, IIT Guwahati was like one interdisciplinary department. And everybody had an opinion about him. He was liked by most, especially by those who came to know him closely, and feared by few. So, when he left IIT Guwahati, everybody felt his absence.

He went on to become the Vice Chancellor of Tezpur University. However, the Vice Chancellorship had no visible impact on his personality and behavior - he was the same PB as I knew him at IIT Guwahati. He had an illustrious career as an academic and as an administrator but he never bragged about his achievements. He had the moral strength not to take himself too seriously. He detested people who were pretentious and showy.

Being an extrovert person, PB liked the company of young colleagues and enjoyed lighter moments in life. He would park himself in the office of a colleague and start an impromptu get together and engage in small talks when he felt like. In one such meeting, he described the state of IIT Guwahati with that of a man who got his priorities wrong. He said, "in a normal situation, a man finds a job first and then buys a house and then gets married and then plans to have a child. But in the case of IIT Guwahati the order is reversed. It is like a man who has a child first and then tries to legalize the marriage and so on." He had a unique sense of humor. He also had a big heart to take unpleasant things in his stride with self-deprecating smile.

As an administrator, PB was very careful not to impose his views on his colleagues. He encouraged free and frank opinion. He was magnanimous enough to accept views of his younger colleague even if those were at variance with his own views. It was normal to have strong arguments with him in the office and then receive, a few days later, an invitation to have dinner at his place. That was PB. He knew how to keep personal relationship separate from pulls and pressures of office matters.

It is sad that we did not meet in the last few years. It just happened that our paths did not cross. But I will always remember him as a kind man who went out of his way to help me when I was a novice. Rest in peace PB.

[The author is a Professor and former HOD of Mathematics at IIT Guwahati.]

Looking back

It is indeed a pleasure to be asked to write and to be able to send my good wishes to the Department of Mathematics of IIT Guwahati on the occasion of the Alumni meet of PhD students of the department to be held during September 19-20, 2020. I have been informed that to date 83 PhD students have graduated from the department and that the department currently has 79 research scholars, and that 20 new students are going to join this semester. These are very large numbers and a completely different scene from how things were when we started the PhD programme in the department in 1996.

We were at Panbazar then, in the building of the Institution of Engineers under the Panbazar over bridge. We began in 1995 with only three engineering departments – Computer Science and Engineering, Electronics and Communications Engineering and Mechanical Engineering, and the so-called ‘service’ departments -- Mathematics, Physics, Chemistry, and HSS, each having at most five or six faculty members. Student intake numbers for the BTech Programmes were also very small then (around 60 for all departments together). The first batch of BTech students arrived in Guwahati almost before everyone else. The hostels were rented buildings in different parts of the city. The labs were not properly set up or equipped. There were not

Meenaxi Barkataki Ruscheweyh

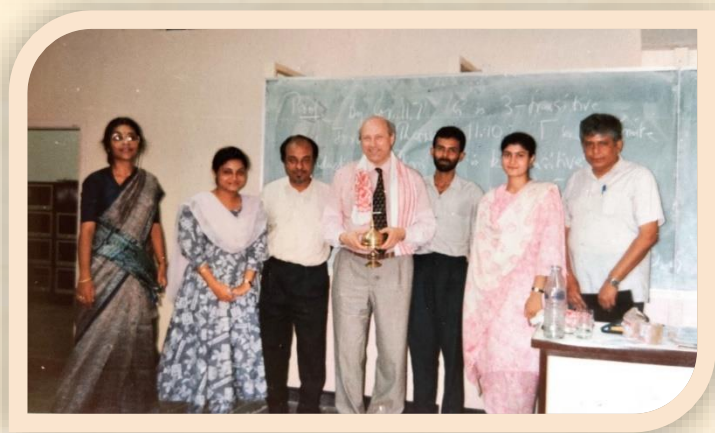


many faculty or staff. We were largely dependent on guest faculty from the nearby Cotton College and other city colleges at least for many of the courses in the basic science subjects. I was the first person to join the department in July 1995 (in fact, I was the fourth faculty to join in the whole Institute after the Director, Prof. Dharendra Nath Buragohain, Prof. Gautam Barua and Prof. Devdas Kakati. Rafik, Sanyasiraju and Dalal joined soon after. Prof. P. Bhattacharyya (who passed away very recently) became our Head. Dr. S. Ponnusamy and Dr. B. Thatte also joined at around that time. Between us we started teaching the Mathematics courses for the BTech students.

But that was not enough for us. We were a young faculty and we were all very interested in continuing with our own individual research as well as establishing a tradition of quality research at IITG as soon as possible. I invited my D.Phil. supervisor from Oxford, Dr. Peter M. Neumann, to come and get the ball rolling. He most kindly agreed to come in the summer of 1996. Wanting to make the best of this opportunity, and understanding that a couple of standalone lectures in algebra by my supervisor would not really work unless we did some preparatory work, we decided to expand the whole concept into a full-fledged 8-week long lecture series on permutation groups and open it up to anyone (with a

graduate degree in Mathematics) who wanted to join. Two other mathematician friends, Dr. H.D. Macpherson from Leeds, UK and Dr. R. G. Moeller from Iceland also agreed to speak at the lecture series. About 60 participants attended the course that was supported by the NBHM, and the 16 lectures delivered during the course became the sixteen chapters of a monograph that was later published on the subject. That course was a huge success and it was a great way to get the research activities of our department started.

Two of the three note-takers for the course – Shreemayee Bora and Shabeena Ahmed -- went on to become the first PhD students of the department, Shreemayee under Rafik and Shabeena with me. Jiten Kalita also started at around the same time with Dalal.



*After a talk by Prof. P Neumann:
Picture shared by Shreemayee Bora*

Today both Shreemayee and Jiten are faculty at IITG. And the third note-taker for our course – Dr. Bhaba Kr. Sarma – is now a senior professor at IITG. In that sense, the impact of that one course can be felt in the department even today. All three of our first batch of PhD students were awarded their degrees in 2002. We also wanted to have our own Maths Masters programme but we were not sure if a regular Maths

MSc would be the right thing to start since one could get that degree from any of the universities in the region. We wanted to come up with a different course. The CSE department was our closest partner department – and we broached the idea of starting a two year MSc programme in Maths and Computing, with their help in the year 2000. Over time, that programme proved to have been a great success, so much so that later a full-fledged 4–year BTech programme in Maths and Computing was started by the department (2006).

I left the department in the summer of 2003, soon after organizing, with the help of my colleagues in the department, a 2-week workshop (with about fifty attendees) followed by a one-weeklong conference on Geometric Group Theory in December 2002. The conference attracted more than thirty reputed mathematicians from India and abroad and helped to put IITG on the research map of mathematics worldwide. Many other events have happened since and the faculty of the Mathematics Department of IITG have been very successful in maintaining a high standard of teaching even while carrying on with high quality research. Looking back on how the department has shaped up in the last years, I have ample reason to be proud and happy and I congratulate each and every one of you for contributing to that development.

Before I end, I would also like to say a few words about what I believe I have understood about the world of research, especially in mathematics. I can't claim any authority on the subject because I wasn't a very successful researcher myself but I can at least tell you why I failed. Somehow I was just too matter-of-

fact, too rational, too little of a dreamer, so while I enjoyed the research I did, I somehow felt I was not creative enough. I was happy when I produced a nice result, but I didn't dance around in joy. Once when I waited for a full week before telling my supervisor about having solved a problem that had been bothering us for months, he shook his head gravely and said, 'Wish you would show a little more excitement, a little more passion.' That is the point I am trying to make. Research is such a thing that if you simply do it well, it is not good enough. You have to live it, love it, breathe it, think about it all the time, discuss it with others who are also working on similar things, and really feel that proving the next theorem is a question of life and death for you – in other words, you have to live your research passionately. If you cannot do that, then perhaps you should be doing something else. Because research is one of the few things where quality is all and quantity is almost irrelevant (at least in ideal circumstances). If you are disciplined and keep working at your subject every day, you will keep producing results which will give you new research papers and take you places, but if the spark is missing, then these papers will be not be good for much else besides elongating your own CV and getting you a promotion or a better job. It will not change anything in the world, it will not help you to understand the world better.

But true research is supposed to do just that – help you to understand the world better. So you have to have the courage to ask the right questions, the interesting questions, even if they are difficult. There are some questions which are doable, but they are often less interesting, and less meaningful. If you

want to be a true researcher, and not just a successful one, then you have to not be afraid of asking the difficult questions and spending all the time it takes looking for an answer. I know that doing this is neither feasible nor advisable if you are a PhD student with a scholarship that is running out or even a faculty who wants to get a promotion or who wants to write a paper to present at the next prestigious conference in his or her subject area. That is precisely where the contradiction lies – that our system forces us to compromise and be happy with our mediocrity even while demanding that we do our very best, and live up to the highest ideals of our profession as teachers and researchers. That is probably the reason why I left mathematics – because I could see that I could only do so much, but the demands of true research and my own expectations from myself as a researcher were much higher. I knew I could not be happy hiding behind a lie and pretending that all was well. That is why I left.

So much for individual research; next, a word about the topics of research. Today after at least a century and a half since the establishment of the standards and methods of scientific research and enquiry, most of the easy questions in every line of enquiry have more or less been answered. The questions left are the big ones and the suspicion is that these questions are still unanswered simply because the tools we have in our hands might not be enough to solve them. Hence now the time has come when every researcher must get out of their comfort zones, and learn how to use a new set of tools, or learn to collaborate with a new set of people who uses other tools, in order to find answers to the BIG questions

that are still left unresolved. This means increased collaboration and cooperation and moving into new hybrid forms of research that do not resemble what we have learnt or seen so far. This also means that we have to learn to work in groups, where problems are sought to be solved by putting all heads together. This also means that gone are the days when mathematicians could afford to sit in their own offices and pursue their own private research fantasies. One can still do that, if one believes that doing research is an end in itself and needs no further justification, or if one is happy to keep churning out routine, technically correct but physically irrelevant stuff that will not make any difference to knowledge. But if one wants to achieve more, then the way to go looks somewhat different. The future of basic science research lies in developing centres of expertise – with a group of researchers working on one big question gravitating to one institute, those working on another big question to another. It also means rigorous and hard years of apprenticeship for each of these researchers, before they have mastered their many tool boxes. Translated into our present system it means a long period of apprenticeship at the post-doc level after finishing one's own PhD where one learns to use other tool boxes from other experts; it also means spending several years in equipping oneself before moving to the stage of becoming a PhD supervisor. It also means total commitment to the subject and a supportive system that understands the demands of real hard core basic research and allocates time and resources for it. And above all it

means researchers who are ready to go the whole hog regardless of how hard the going is, who do not care what else they get by doing research as long they get a kick out of what they are doing, who will start dancing with joy when finally the 'eureka' moment comes.

I cannot end before making a case for three important and vital areas of research which seem to have been neglected so far at IITG – research in mathematics education, research in the philosophy of mathematics, and research in the history of mathematics, and more generally, its place in the history of science. These are not soft subjects, make no mistake. Research in these areas are as difficult as doing mathematical modeling or fluid dynamics. But research in these areas are important if we want to see the link between our research and our humanity, between mathematics and the liberal arts, and also to bring about changes in how mathematics is taught in the classrooms. Research in these topics will certainly help us to understand the world better – and perhaps also to make it a better place for all of us. It will be a dream come true if these subjects also became topics of serious research at IITG in the future.

Thank you very much for listening and here is wishing you all the very best!

[The author is a former faculty member and HOD of Department of Mathematics at IIT Guwahati. She is currently associated with the VU University, Amsterdam and working on the Moran-Matak communities in Upper Assam. She divides her time between India and Germany.]

Photo Collage [MTTS 2001]



MTTS-May21-June16, 2001: Pictures shared by Kaushik Mukherjee

A PhD alumnus of the first batch reminisces



Shreemayee Bora

I was writing my MSc examination on a sultry afternoon in 1996 when one of my teachers in the Mathematics Department of Gauhati University came and whispered in my ear, "Meenaxi is organizing a workshop at IIT in which she would like you to join." Meenaxi madam (Dr. Meenaxi Barkataki-Ruscheweyh) was my teacher in the final year MSc class who had recently left the university to join the Mathematics Department of the newly established IIT Guwahati. I was curious to see and know more about the upcoming institute. Besides I couldn't say no to madam! Little did I know then that the small whisper was going to give a whole new turn to my life and be the beginning of a nearly 25 year association with IIT Guwahati.

The workshop on Infinite Permutation Groups turned out to be an experience at a whole new level for me. It was a very intense affair! Some of the experts were world renowned mathematicians from UK and other parts of the world. Myself, my classmate Shabeena and Prof B K Sarma who was then our teacher at Gauhati University, were working very closely with them as note takers.

Needless to say, as a fresh MSc, I was quite in awe of it all. I was getting trained in thinking mathematics and writing proofs in a way I had never experienced by very good and incredibly friendly mathematicians. But much more than the mathematics, the experience laid the seeds of ambition in my mind for a brighter future than I had ever envisioned for myself.

It was around that time that I was due to appear for the UGC-CSIR JRF examination. While awaiting the results, I was frequently at IIT Guwahati's then temporary abode at the Institution of Engineers Building near the Panbazar over bridge in Guwahati. Meenaxi madam had put me and Shabeena to work on typing the workshop notes in the LaTeX software. This was a completely unfamiliar experience and a rather tough one for us at that time. But little did I know what invaluable training we were receiving for the future. I persevered and the notes were compiled into a book in the TRIM series of the Hindustan Book Agency. Eventually I cleared the fellowship examination and the interview for admission into

IIT Guwahati's first ever PhD programme in Mathematics and of all the people, my parents were the happiest as I was into a PhD programme in a good research environment while still staying with them. Since I was always interested in analysis and algebra, I chose Prof Rafikul Alam as my guide. The early days of IITG were rather heady. The

Prof M. K. Chaudhuri, former Vice Chancellor of Tezpur University, who at that time was the Head of the Chemistry department, wishing me "Good Afternoon!" if he saw me arriving at work at 9:15 a.m.!

Since my research involved no laboratory work other than some programming, I felt least



During the workshop on Infinite Permutation Groups: Picture shared by the author

institute had started in a single building housing various departments with no clear demarcations between them and everyone pretty much knew everyone else. The research scholars of all departments occupied a common space and friendships grew thick and fast. Faculty from other departments were also always ready to help. Some of the senior faculty were very particular about imbibing a positive work culture in us. I remember

restricted by the space constraint. However, the very slow internet and lack of wide access to online research material were definite constraints in the initial years. But now looking back, I realize that those were obliterated by a burning desire to make the best of what we had and succeed. And what we had was still plenty. I learnt a lot from Prof Alam and Prof S. Ponnusamy who between them taught me six courses in my PhD coursework.

These were specially chosen for me after I had appeared for an interview before all the faculty members of the department soon after joining the programme. The mentorship of my PhD advisor was substantial in terms of both quality and time and standards were sought to be maintained at all levels. My oral comprehensive examination was taken by all the faculty of the department. The research scene was also quite rich and vibrant with well-known mathematicians from India and abroad frequently visiting the department. I remember giving a number of seminars in the presence of these distinguished visitors. Seminar series, workshops and training programmes were frequently held and these were well attended by faculty and students from other institutions. I also remember getting a new complex analysis problem to solve in my email almost every other day from Prof. Ponnusamy even after my course work with him was over. But most of all, I had a sense of purpose in my research. There was no doubt in my mind about the quality of my research problems and I was spurred on by early progress in my work.

A great deal of excitement and enthusiasm was in the air when finally the time came to wind up activities at the building in the city and move to the Transit Complex which is now known as the Technology Complex. The first convocation of the institute was held within the grounds of the

complex in 1999 and we were very actively involved in it. New departments were being added while the administrative and academic complexes were being prepared for them to move in. As a young institute was taking shape and spreading out over vast expanses of a beautiful campus, the first PhD alumni of the department were getting ready to defend their PhD theses and set off on their individual journeys.

The years spent in working towards a PhD are invaluable as they lay the foundations of future professional and academic life. We may have missed a rich and vibrant campus life with all its facilities but looking back now, I feel that spending that time in a new IIT did have a tremendous positive impact as everyone including our research guides were very driven to make their marks in academics as young faculty. My confidence in my PhD guide and the research we did in those days were validated in the years to come in the form of acceptance in very good journals and conferences, and ultimately in the research group of one of the most influential mathematicians in my area, Prof Volker Mehrmann with whom I did my post-doctoral research in TU Berlin. Till date that association has opened the doors of opportunity for quite a few more PhD students of the Mathematics department, including my own.

IIT Guwahati as an institute and the Mathematics department in particular has come a very long way

in all these years. The vibrant and beautiful campus with all the state of the art facilities has a special place in the hearts of those handful of people housed in the single building at Panbazar. It is also a fruit of the passionate efforts of visionary pioneers. Today the many successes of the IITG alumni spread all over the country and indeed the world feel like personal successes to those like me that were witness to the humble beginnings.

Personally speaking, my career path after obtaining an MSc degree has been inextricably linked with the Mathematics Department of IITG. This journey has been all the more fulfilling as I have had the good fortune to give back to the

department by serving it as a faculty and 'touching the future' of the nation by teaching bright young people. This transition, from student to faculty has been made possible despite many obstacles, by the encouragement and unstinted faith placed in me by my mentors from the early days of the institute and this support has come at very crucial junctures of my career. I am fortunate enough to be able to hold on to it even to this day and all these years have been all about living up to that faith - a process that I happily suspect, will never be complete.

[The author is a Professor of Mathematics at IIT Guwahati.]

Why to do research - My own experience

An obvious question by a layman may be “what will you do in research or PhD”. This question was asked by a person from my village who is a school teacher, when I was going to join IIT Madras in a DST project in 2001. In fact, he said all formulas such as $(a+b)^2$ etc. are already invented, what else are you thinking of finding. I could not answer his question at that time. Though I spent five years for PhD at IIT Guwahati and then another three years of PDF at IISc Bangalore and published a few research papers during this period, I did not find the answer and have always been thinking about the same question.

Subash Chandra Martha



During the PhD-PDF stint, I thought that PhD means to find a sequence of specific problems in some area of your topic and find or develop some methodology to solve these problems. One may note that finding a specific problem in the starting of PhD is not that easy. Telling the word “PhD” may be easy but when you expand and say “Doctor of Philosophy” then it has a deep meaning. Then after a few years, I realized that though a student has to publish a few papers and write a thesis for his/her PhD degree, understanding the concept of basic subjects and applying and developing them suitably to solve the particular problems is the actual research.

If we think research is a tool for building knowledge and facilitating learning, that means understanding various issues and public awareness, we can classify it



Convocation 2007: Picture shared by author



Thesis Defense: Picture shared by author

as either Scientific Research or Innovative Research. In scientific research, I, along with my research group, am still trying to develop new methods to solve some problems related to wave structure interaction which has wide applications in ocean and marine engineering in many countries. Among many, one such application

is the interaction of surface gravity waves with very large floating structure (VLFS) for the utilization of ocean space. This interest is due to urban development which is expanding continuously due to increasing population in the countries where land scarcity exists and in the countries which have long coastlines. Such

nations resort to land reclamation from the sea in order to avoid congestion in the used land space. So, researchers and engineers have proposed the use of VLFS for habitation, industrial space, airports and storage facilities in response to the above problems. VLFS has the advantage that it is an artificially created land which floats on water body and at the same time has a minimal effect on aquatic habitats, tidal current flows.

[The author is an Associate Professor of Mathematics at IIT Ropar.]



Receiving Degree: Picture shared by author

A dusk with the Brahmaputra

He is a river! Unlike other rivers known to me, it is not feminine. Not knowing rather not bothering about why is it so, I am moved by this mighty river's limitless beauty and infinite mystery. Along his two sides, jungle-filled hills rise towards the sky. In rainy days, he hugs those nearby hills from their feet up to their knees. The feeling of this embrace probably would have been unfulfilling for them! But the on-lookers get overwhelmed by a sense of ultimate fulfillment of this divine manifestation of affection. The deep and dense forest begins exactly from where the river waters end at the bank. And it spreads to the head and probably up to the life-key hair (ayushabala; the hair on the head of a demoness whose uprooting causes her death, as described in the mythology). Folklore says the water of Brahmaputra is linked with the netherworld or Patala (a mythical world below the earth). Thus an eternal and rare relationship connects the deepest point of the earth to the boundless sky through the river water, the jungle on the bank and the hill. How dedicated a role the Kamakhya hill has been playing for the sacred meeting of the earth and the sky is beyond my small world of comprehension!



Tarakanta Nayak

In the time of rain, the bank of Brahmaputra remains non-existent, so to say. With the receding river, the huge and beautiful stones emerge from water. Those were formed by the continuous penance of the river water in bringing out the beauty from those wild stones. They seem to invite the chisel of some sculptor in order to fulfill their wishes to become a pyramid, a temple or something of that genre. Their feet in the water and the rest of the body is white-washed by the clay. Thanks to Brahmaputra for carrying those mud through his journey from the other side of the Himalayas! The tiny waves of the river caress them like a pristine tribal (adivasi) girl.

The dusk descends there. A golden pillar is seen spreading above the water and standing on the yellow setting Sun at the horizon and heading towards the earth. Connecting the mainland to the seven states (Assam, Manipur, Meghalaya, Mizoram, Arunachal Pradesh, Tripura and Nagaland, sometimes called the seven sisters) of my country, stands the great Saraighat bridge like a meditating devotee (samadhista). Looking at the festive birds in the sky over the bridge, I wonder whether Saraighat is a misnomer of

Charaighat, which means a place of birds. Few dolphin-like fishes play with small leaps on the river surface. Those happen to be the only reason that is capable of disturbing a spectator, immersed in the ambience of oneness. Fishermen brothers return with their hully dingha (small wooden boats which is run manually) along the bank. Neither that dingha hurts the innocent Brahmaputra like a technology driven motor boat nor does it pollute the crimson silence.



Picture shared by the author

The golden pillar slowly transforms itself into a temple-ephemeral yet real. The temple starts to dissolve. I feel

the fire catching the temple and the golden temple starts melting. The chirping birds return to their homes after finishing the last rites of that dying temple. But the pyre still burns. Its height diminishes from the shikhara (temple-top). By the time the pyre douses, it would be complete dusk. The mighty Sun looks like a mere fire ball. The burning temple has now disappeared into nothingness. The red ball of fire diffuses in the river water. From the smoggy horizon, the king of darkness charges in with his army.

I feel cold.

The appearance at the distance disappears.

I feel the tender press of someone's palm on my left shoulder. "Come. Have you been unmindful about the unfinished struggle for a life? I mean to say the pursuit undertaken for securing a better life - the research! "

[The author was a research scholar when the article was written on 13 January 2002 (time of the popular Assamese festival of Magh Bihu).]

[The author is an Associate Professor of Mathematics at IIT Bhubaneswar.]

An edge of my life

I was working as a lecturer in Handique Girls' College, Guwahati. It was during the year 2002 when I was attending the evening discussions on Group Theory motivated by which, I decided to apply for the PhD program in IITG. During that time, since I was already working, I had a difficult time in preparing for the interview as I was out of touch of teaching undergraduate students for 5 years. I enrolled myself as a PhD student in July 2002. I had to teach classes in the first half of the day in college and rush back to IITG to attend the classes of the PhD course work; I had to commute between these two places by ferry and sometimes by IITG bus which was time consuming. As such I was unable to take a break and sometimes dozed off on my study table. Among all the research scholars at that time, I was the only one with service in college. I could avail the Faculty Improvement Program (FIP) after about one year. I couldn't avail a hostel accommodation and as such I



Milan Nath

had to rent a house in North Guwahati itself in order to save the time spent for commuting from Guwahati to IIT campus. Now I was able to spend my desired time in the department and sometimes stayed overnight in my research scholar room trying to complete the work entrusted upon me by my guide. Due to this, I had almost no hostel experience. From there on, I could devote myself to research under the guidance of Prof. Bhaba Kumar Sarma.

I was heavily influenced by many faculty members during this period. After the completion of my PhD, I had an inclination of teaching post-graduate classes and subsequently got an opportunity to join Tezpur University as a faculty member.

I would like to thank all the faculty members of IITG who helped and motivated me directly or indirectly during that period.

[The author is a Professor of Mathematics at Tezpur University.]

My unforgettable memories

There have been times which everyone would always want to remember throughout his or her life. Here, I am preparing myself to recollect the most memorable moments of my academic research career in my life. The days in Department of Mathematics, IITG as a research scholar are certainly the ones that first comes to my mind which I am sharing through this platform. It was really a joyful moment for me to hear about my selection in the PhD programme in Department of Mathematics, IIT Guwahati and my dream came true. I joined the department in July, 2005 as a research scholar and completed in October 2009 under the supervision of Prof. Swaroop Nandan Bora.

I was quite nervous and faced the most challenging moments when I reached IITG campus to take admission, as this was my first visit outside the university in my home state where I previously studied and subsequently stayed there for more than four years. However, as time passed, I realized the reality of my assigned duty and my mind slowly accepted the demands of being a research student there. Environment was totally different from the university where I previously studied in my state. In the first semester, it was really a tough time to prepare for exams for the course work. I received strong motivation and guidance from my concerned course work subject experts like Prof. S. Natesan, Prof. J. C.



Smrutiranjana Mohapatra

Kalita and my supervisor Prof. S.N. Bora on improving my knowledge in theoretical as well as numerical skills about the research associated with water wave problems. During my stay in the department, I found the atmosphere to be excellent which inspired me to carry forward my research work, effectively driven by the support of my mother who passed away at the end of first year of my PhD.

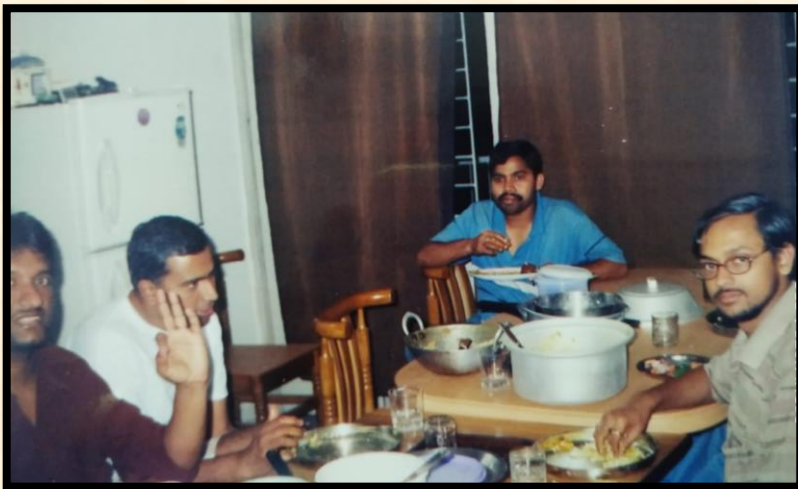
Though doing research in any field was a challenging task, but I always found it like a game and was involved like a player to shoot at the goal. Also, I was strongly supported by my supervisor at every step. I firmly believe that a person should do research to bring advancements in his chosen field and never ever choose research for gaining monetary benefits. It was a gradual process for me to experience and enjoy being a growing researcher at IIT Guwahati which was another means for me to further study the field of water waves problems in particular, areas like marine and coastal engineering with which I am associated professionally after completing my PhD. Moreover, the teaching assistant duties like taking tutorials and conducting Masters' labs were good opportunities to improve my teaching skills and minimize the nervousness in the classroom. There were many sleepless nights in the research scholars' chamber in the department when there was a tremendous

pressure of acquiring the useful as well as novel outcomes. I always longed as well as thrilled to be with senior scholars and other friends, in particular my close friend Dr. Jugal Mohapatra, who were always sincere, encouraging and well-disciplined towards the growth of golden culture of the department.

The four years spent in the Department of Mathematics were wonderful and I have so many fond

memories of the department as it inspired me to learn confidence and self-discipline to start the journey into my real teaching and research life. Overall, I thoroughly enjoyed my days in the Department of Mathematics, IITG.

[The author is an Assistant Professor of Mathematics at Veer Surendra Sai University of Tech., Odisha.]



Holi Celebration: Pictures shared by Kaushik Mukherjee

Five struggles of my PhD life

Well, as the title suggests, I feel (though I am no more a PhD student now) that these topics are encountered by each and every PhD student. As a PhD student normally spends at least 4 to 5 years in India, there are some challenges that you are almost certainly going to face. Below, look at most common problems that PhD students encounter. If you are considering a PhD, advanced awareness of these stresses may help you overcome them.

Let's begin.

1. Stress: Since I travelled from a small city and small state university to an IIT, I was extremely stressed as a new PhD student. Though later on, I found I was NOT alone with such feelings.

NB: My supervisor's voice not so soft, but slowly, I found the caring in that 'rudeness'.

2. Infringe with my guide/supervisor: As we understand "G" for God, "G" for Guide, and the most common problem that arises between a PhD student and her/his supervisor is the difference of opinions. Supervisor, an occasional friend, is a full time boss. It's an odd combination more complicated than Saas – Bahu, hard to maintain.

NB: No idea of a great supervisor...but my supervisor is a great human being.



Jugal Mohapatra

3. Isolation: The most common problem for PhD students is the feeling of isolation. PhD candidates often work alone, having a few, or sometimes no other people on their project.

NB: My supervisor's call in early morning at 5.00AM while he was travelling/waiting in airport lounge engaged me several times.

4. A balanced life: From supervisor's point of view, a PhD student is expected to work all the time; to be in the office every weekend and to study day/night. But this is not sustainable; you also need time for family and friends.

NB: I had no idea when my sir made me a part of his family.

5. Fear about the future: As a PhD student, I was not only worried about the current project but also concerned about the future too. There is no guarantee that getting a PhD will lead to a desirable job.

NB: When someone believes in you, the chance of a good future is ahead. In short, PhD life: some of the best days of my life, lesson learnt is "Learning and growing".

[The author is an Associate Professor of Mathematics at NIT Rourkela.]

Photo Collage (Farewells)



Pictures shared by Kaushik Mukherjee

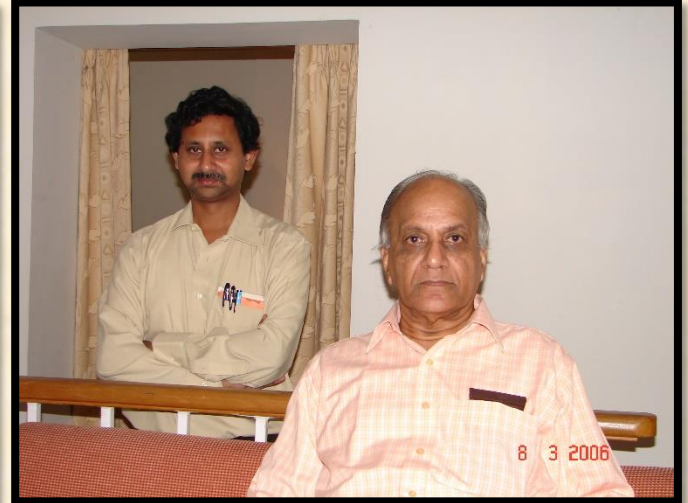


Pictures shared by Kaushik Mukherjee



*Prof. S. N. Bora presenting a gift to
Dr. Kumari Saloni during her farewell
dinner on 08.03.2017*

Photo Collage (10th Year Celebration of Mathematics Seminar Series)



Pictures shared by Kaushik Mukherjee

No...I DON'T WANT TO JOIN IITG

Cosmika Goswami



This was my thought while I was filling out the PhD application form. I always wanted to do Computer Science and have a smart job in Mumbai or Bangalore earning lots of money. I applied for a PhD as a backup and also because my parents wanted it more than me. I went through the entrance exam and interview believing that I am not going to crack it anyway. But as it happened, on a hot summer day in June 2005, our landline phone rang, and I found out that I had been selected. I was destined for a PhD in probability theory, the topic that I scored the least during my masters at IIT Delhi, and that too in my hometown Guwahati. It didn't seem like I was following my dream. Little did I know it would be the most transformative decision of my life. I joined under Prof N. Selvaraju in July 2005.

I was stunned when I saw the beautiful campus of IITG with its picture-perfect natural beauty on the banks of the glittering Brahmaputra. Every student would remember their first climb to the top of the hilltop and the arresting views of the campus below. I consider myself very lucky to have seen the campus grow around me. It has given me a strong sense of belongingness to my alma mater. The magnificent library building was built before my eyes. When I

started, there were only 4 hostels - Subansiri, Dihing, Manas and Kapili. Many departments were added to the academic complex building during my stay. I am yet to encounter a more uniquely built guest house building. When I joined the Mathematics department, we shared offices with Computer Science and Engineering (CSE) for a year till we got our own east wing. Only after that, was I able to distinguish our maths professors from the CSE professors. My PhD journey was like a rollercoaster from days of gloom, annoyance to fun, excitement, victory and finally satisfaction. Like others, even I used to grumble about my supervisor. Not because I expected more from him but because sometimes, I failed to keep up to his expectations. He is a man of discipline, organized, punctual and with a deep knowledge on the research topic. He wanted to do everything perfect, from an efficient way of saving a journal paper in your computer to the blank spaces next to full stops in your thesis. Even today when I save a journal paper, it reminds me of him as I follow his method. My PhD was a steep learning curve for me, not only on the research topic but also to be a better researcher and to face the outside world. I bow my head to my supervisor for

taking all my tantrums and channeling them in the right direction. I would have learnt more if I would have stayed longer but I'm afraid 5 years was long enough.

After my PhD, I pursued my interest in computer coding and played with some of the famous programming languages. I applied for postdoc in subjects apart from mathematics where there was a requirement for statistical knowledge combined with computer programming skills. My first postdoc was in Genomics and Genetics in Edinburgh University, UK. My knowledge in biology was basic but they wanted to develop an in-

house statistical tool to predict genetic behavior of some species. I realized how versatile and important the knowledge of statistics is to real world applications with strong assistance from computer programming. I had to learn biology from where I left in school and I admit it was pretty hard! Today I am working as a Bioinformatician at Glasgow University developing software/tools based on statistics and Markov modelling to identify disease related genetic markers that can help doctors do an easy diagnosis and quick treatment of some of the world's deadliest bacterial infections. So, did I get to follow my dream? Absolutely yes and I would not change any bit of my past if I would ever get a chance to do so. I feel happy today in my endeavor to reduce pain and illness in this agonizing

world through my work. I realize how parents have the ability to foresee the practical side of life while a teenager just wants a shortcut to their dream. When I



*Special dinner party for the whole department at the Guest House in April 2006:
Picture shared by the author*

look back, I see myself becoming practical and mature while in the company of my friends, my seniors and friendly teachers at IITG. I believe every event and every incident was of great importance in spicing up my life. The bad incidents gave me valuable experience and good ones gave me memories. I cherish all those moments in my IITG days, not only because I met my husband there but also I made some amazing friends. Evening strolls with friends after dinner, chatting in the hostel corridors, unannounced parties, late night movies and gossiping about our teachers - I could not ask for more from my IITG days. I wish I could be 25 again....but I am not getting any younger, am I?

[The author is a Bioinformatician at University of Glasgow, UK.]

Journey to the core of IITG

It is a story of me and my friend whom I never leave alone. One evening in the early summer of 2001, suddenly a friend came to us with some papers in hand and asked to have a look at it. After having a curious look, we discovered that it was nothing but an application form for admission into the MSc programme at IITG. Till that evening, we had no idea what does an IIT mean, although we live in a place which is just 30 km away from IITG. The application form was filled and sent. Few days later, we were on our way to appear for a written test. On the way to the beautiful campus of IITG, how can we forget that excitement of crossing the mighty Brahmaputra on a ferry and that fantastic view of Umananda for the first time in life? On our arrival at the examination hall, we could see a teacher with nice smile, who was little fat (?), very friendly, wearing a loose horizontal striped T-shirt, giving instructions about the test. Few days later, on a bright sunny day, the most unexpected but a very good news reached us, a call for admission at IITG. Our journey began there.

Thanks to all those amazing teachers, on the very first day itself at IITG, it was realized that our way of learning mathematics in the past was not in the right



Debajit Kalita

direction. Suddenly but not surprisingly, I fell in love with the subject, got the required motivation and determination to learn further. Things had changed overnight. All was well till the evening of 4th September, 2001 when BSc Examination results of Gauhati University were declared. It was like a storm that blew away all the dreams that my friend had just started dreaming of. Quickly he overcame this nightmare with more determination, thanks to the encouragement of those amazing teachers of IITG. Later on, that few months experience of IITG proved to be the turning point of his life.

Five years later, during an evening at Tech Market of IIT Kharagpur campus, we were roaming without any real purpose. Suddenly, we could see someone with his trademark smile. Yes. That was him - that friendly, little fat (?) teacher of IITG who was wearing a loose horizontal striped T-shirt five years ago. Probably, it was a reunion after five years. Although we were talking after a five long years, it seemed like as if we were in regular touch. He was there for a week. On his last evening of that trip, we walked across the IIT Kharagpur campus and at the end took Dahi-Bada and Tikka. During the walk, we had a lot of

conversation and my friend expressed his desire to leave that place. Then only we came to know that the very next day was the last date for applying for PhD at IITG. On the next morning, he was kind enough to take my friend's application form along with him, to draw the required DD of Rs.150/- towards application fee by himself and submit it at IITG before deadline. Thereafter, at around 1.30 PM on that day itself, he did not forget to inform that he had done his part up to submitting the application. My friend left no stone unturned to prepare for the interview. Finally, this time

he got the ticket to enter IITG and then complete his thesis to receive the degree under the super special guidance of an amazing supervisor.

One evening in the early Autumn of 2011, the sun was about to set, the shadows had started becoming longer and longer, sitting on the north bank of Mahabahu Brahmaputra near Kolia Bhomora Setu, my friend asked me to leave him alone forever. And the immediate reply was: How can your "Shadow" leave you forever?

[The author is an Assistant Professor of Mathematics at Tezpur University.]



Rani Picnic 2009:
Pictures shared by Debajit Kalita

Photo Collage (2011)



Seniors at the Fresher's Welcome 2011: Pictures taken by Himadri Nayak



Kulsi Picnic 2011:
Pictures shared by Debajit Kalita



My Days at SHANGRI-LA

A ubiquitous answer to the question “who do you want to be once you grow up?” that every teenager encounters at least once is to be like his/her parents. That would have led me to acquire a job in a government sector, which I did eventually, but through an alley of academics/research, which I am sure my parents have not anticipated. My path took a turn when I got my MSc admission at IIT Guwahati – oh, yes – my journey at IITG started from my days of masters, or I should say “my days at SHANGRI-LA” started from thereon. On the 2nd last day of July entered a scared yet enthusiastic boy who had never stayed a single night away from his parents, forget about staying in the hostel, into the campus. When a boy’s association with the term “IIT” was so far limited to the textbook exercises in which a particular question asked in one of the past IITJEE exams was printed, it goes without saying how he would have felt once he crossed the gate to enter the campus. But once entered, there was no coming back, and everything he could dream of becoming in the coming years is within reach to be grabbed.



Santu Das

It would have been overwhelming to find yourself surrounded by people from different cultures, and I am no exception. It took a few initial days to overcome the cultural barrier and be myself, thanks to my new friends, seniors, and other community members who helped me overcome my fear. These days taught me to be responsible and take care as the fast life at IITG would not allow me to be self-centered. Apart from the studies, there are other aspects of life, viz., hobbies and passion that can be nurtured. The rich culture inside the campus helps to build one’s character, and I am forever indebted to IITG for that. The two years of masters just went in a flash, leaving beautiful memories in the form of spending quality time in the hostel with friends, late-night outing, visiting the mighty Brahmaputra riverside, eventful classes, picnics, fresher and farewell programs, and the interaction with the faculties. It was the second year of my masters that made me think about my priorities in life – that life-long question of who I want to be. Thanks to the Indian Academy of Sciences summer research program, and later my master’s project, I finally could adequately answer the “life-long” question with – “yes, I want to be a researcher.” Fortunately, I got an offer to pursue my PhD from IITG,

and my journey through SHANGRI-LA continued with a lot more fun, and ups-and-downs.

My PhD journey started with a smooth transition from being a master's student towards a researcher, giving a palpable vague notion of life being a walk in a park,



Picture shared by the author

which is not. It took me three years to solve my first research problem. In between went a sufficient amount of time in trying out different methods without success. I found my Good Samaritan in the form of my supervisor, whose constant support and encouragement helped me stay focused and shepherd me academically and in a personal front. Not to mention that my fellow researchers made my stay at IITG memorable - be it sports, visits to different places outside campus or state, birthday celebration, and parties, picnics, or the quality time spent inside the campus. Talking about the campus, a description of

SHANGRI-LA will remain incomplete if I do not mention how beautiful, scenic, and mesmerizing it is. When one has not one but two green-top hills inside the campus, it cannot get more satisfactory in terms of view and a small hike to the top. The mighty Brahmaputra flows

outside the campus just merely 100 meters away.

On a day with a clear sky, one can visit the river bank to watch the sunset behind the Saraighat Bridge or be lucky enough to witness a perfect dive from a river dolphin. The diversity in the landscape is prominently visible from hills through green lawns to water bodies. Talk about biodiversity, and one can have lakes inside the campus where migratory birds shelter

and make a home during winter, even leopards can be spotted if one gets lucky. During monsoon, one would be amazed to see the silhouette of the hills above the cloud and ask a rhetorical question, "Is this heaven?" If the clouds are enthusiastic enough, one will be fortunate enough to feel the moist of them while standing in the hostel corridor. Although the climate remains moist for most parts of a year, frequent rainfall provides much-appreciated relief from the humid condition. At that point, the campus's scenic beauty reaches its peak when one watches the lush green campus drenched in the rain. The visible ray of light

coming through the passing cloud and illuminating a portion of land otherwise shadowy reminds me of our own life inside the campus. Good and bad times are parts and parcel of not only researchers' life but in general, all life forms. One needs to hang on until that ray of light emerges through the dark cloud and again lightens one's life.

The words are too limited and scant to describe what it feels to be in the IITG campus, whether academic or non-academic. I experienced campus-life at IITG when it was in its teenage days with lots of construction works going on, and subsequently, a lot of changes have

happened after I left the campus almost six years back. But the campus life, including the interaction with the faculties, time spent with my fellow researcher friends, and the natural beauty, have an impeccable impact on my life to shape it in a form that will last as long as I breathe air. I wish IITG would keep providing such life-altering experience and play a pivotal role in shaping the lives of aspiring researchers, and overall produce good human beings.

[The author is an Assistant Professor of Mathematics at Institute of Advanced Study in Science and Technology, Guwahati.]



Pictures shared by the author

My Days at IITG

Since, every teenager has a dream to become successful in his life, so did I but for me, it was very difficult since I belonged to a not very well-educated family. There was nobody behind me to show the right path, that's why I never thought that one day I would complete my PhD, that too in an IIT. I kept following the paths of my friends who used to be rank holders. I knew my main (may be only) weapon is my hard working nature. Hence I qualified CSIR NET & GATE twice and then I took admission for MTech. in IIIT-Allahabad. Due to recession, at that time many senior students were not placed. So in between MTech, I applied for PhD in IIT Guwahati- o yes, now my new journey started from the interview of PhD in IITG. I remember that my interview was very interesting and good (one faculty from IITG has mentioned it) because I did not have any pressure since I had already engaged myself in MTech. Finally, I was selected for PhD in IITG. I would like to mention that all the faculty of IITG are very good and cooperative, as I was allowed to choose my supervisor on the basis of my interest area though I was selected for a different research area. Hence my journey of life started in the right path under a great mentor (supervisor).



Mohammad Hassan

It was an enormous feeling to find myself surrounded by people from distinct cultures. It took a few initial months to overcome the cultural barrier and be myself, thanks to my new friends, seniors, and other community members who helped me overcome my fear. Lessons of these days taught me to be responsible and to keep balance between the fast life at IITG and me. Along with studies in IITG, we enjoyed other aspects of life, e.g., playing cricket with seniors.



Picture shared by the author

Departmental cultural activities, especially at the departmental picnic every year, we enjoyed a lot in terms of making food ourselves, playing some games, etc. I remember that we enjoyed with snacks in conference room during free discussions on tutorial classes so that we could improve our knowledge - those days are unforgettable for me. One incident I want to share you is that when I was in RS room around 3:00 a.m., there was an earthquake and I was alone at that time. So I was completely scared but when I felt the first earthquake of my life in IITG in a class, I shouted because I had not experienced an earthquake before. As time passed, I have learnt so many things from IITG campus - how to write a paper, how to study,

My PhD degree started with some hard work on the research problems, as it is true for almost all research scholars. It took me almost three years to complete my first research problem. In the meanwhile I attempted so many methods with success and during this time I also learnt the coding in MATLAB. I thank God that I found a great, soft-hearted supervisor whose constant support and encouragement helped me to do good work when I lacked confidence. I am really very much thankful to my supervisor as without him this journey would not have completed. I would also like to mention my fellow researchers who made my stay at IITG comfortable since we always felt like a family and they stood for help whenever required.

I remember that there was a Ferry Ghat and we went there many times and enjoyed and felt the depth of water of Brahmaputra River. The hostel life was very amazing in IITG. There was very memorable delicious food served to us in the form of dosa, idli, etc., and one special item on Sunday. There was a cricket league tournament every year in Barak hostel. I played night matches and fully enjoyed. Though we were away from the family during the festivals like Holi, Deepawali, Eid, etc., we still fully enjoyed at the campus itself. We arranged and made ourselves the sawai in Eid and distributed to each of the boarders of the hostel. We used to invite faculty also. These days are unforgettable for me and it was just like spending time with one's own family. The weather of North East India is pleasant almost throughout the year and the campus of IITG is full of greenery. As the hostels are inside the campus, the life will be usually contained in the campus itself with the occasional outings in search of good food. The life at IITG is vibrant and energetic all in one. This is



Picture shared by the author

how to think on problems in a mathematical way. I am highly indebted to the IITG for improving my personality and capability in different ways and also in building my career.

definitely one of the reasons why students desire to pursue their studies here. There are a number of co-curricular activities whether technical, cultural, social or sports events, to keep the students busy. Campus life gives us complete freedom to either pack it up in routine filled with activities to do, that may be fun, or the activities to do to improve our own growth. At IITG,

there are various peer elements that team up to innovate in any field, be it technical, cultural or social services. This is the reason I believe differentiates our campus from other campuses.

[The author is an Assistant Professor of Mathematics at North Eastern Regional Institute of Science and Technology, Arunachal Pradesh.]



PhD Premier League Champions: Picture shared by the author

The people and the nature

The people and the nature; that's how I would like to cherish IIT Guwahati throughout my life. Usually to me, a place is remembered due to the nice people I meet there, the beautiful time I spend with them. When it comes to IIT Guwahati, where I spent almost six years during my PhD in the Department of Mathematics, the nature is an automatic add on. The hills around the campus, the beautiful lakes, the hilltop, the cloud covers, the nice blue clear skies and the mighty Brahmaputra would always amaze you any day. And the warmth of the people, both in campus and outside, is too good to remember. The teachers, their helps in many issues are unforgettable.



Kaushik Mondal

Friends in the hostels, times spent by gossiping and playing together, those memories bring out a smile even today. And who can forget the foodies and our frequent dine-out altogether.

The people who are close to my heart, some of them are still in IIT Guwahati while others are living their lives in different places around the globe. Alumni meet gives all of us a nice opportunity to meet again, cherish those memories together, have fun and also share some academic stuffs. Unfortunately though, this time it is going to be online, hopefully next time we will be able to meet in our lovely campus in person. Waiting for that event.

[The author is an Assistant Professor of Mathematics at IIT Ropar.]

Learning swimming from YouTube!



Shibsankar Das

During my childhood, my father used to go to the local water body to swim and bathe every day before going to his office. I also accompanied him by sitting on the carrier of his cycle whenever I got a chance. I was mesmerized to see him swim from the banks of the water body. In my demand, my father helped me to learn swimming. But I had to stop it after the first day because my mother raised an objection as she was apprehensive about my safety. This instilled fear of swimming in me and buried my aspiration deep in my heart. But my latent desire got fulfilled when I enrolled myself as a PhD scholar at IIT Guwahati.

While returning from the Czech Republic after completion of part of my PhD work in the Department of Theoretical Computer Science, Czech Technical University (CTU) in Prague, under the prestigious HERITAGE (Erasmus Mundus) Fellowship, I came to know about the accident of the Malaysia Airlines Flight 370 (also known as MH370). According to the reports, the flight disappeared into the Indian Ocean and this incident shook me from inside and ignited the wish of learning swimming. Soon after I got back to the IITG campus, I was very determined to learn swimming ASAP. Meanwhile, my PhD colleague Rahul (Name

changed) got himself enrolled in a one-month swimming training camp at IITG during summer 2014. During one of our tea breaks, he expressed his disappointment that he could not learn swimming even after the completion of the training program. I suddenly challenged him and myself that I would learn the art of swimming in 7 days without a trainer and my arrogance annoyed him a bit. The day after that, I started to learn about the ABCD's of swimming from Google. I spent sleepless nights watching YouTube videos and got myself registered for availing the swimming pool facilities of IITG (without a trainer). My batch mate Punit also accompanied me during the whole process. After my step-by-step efforts and hard works, I was able to swim (freestyle) successfully in just 3 days and later on tried the other styles of swimming such as breaststroke, butterfly, backstroke, etc. These experiences made me realize that with our hard work and dedication, we can achieve anything and can overcome any fear.

-- HAPPY SWIMMING!

[The author is an Assistant Professor of Mathematics at Banaras Hindu University.]

The daily nothings at IITG



Dishari Chaudhuri

(1)

It was a lazy Sunday evening, most probably in the month of September of the year 2011. A few of my friends (let us say X, Y, Z, S and T) had gathered in my room, C-238 of Subansiri hostel and we were chatting away merrily, completely unaware of the imminent danger that was about to befall on us. And then it struck, the first ever earthquake of my entire life. The next few events happened very fast within a timespan of about 2 seconds maximum. All I remember was girls screaming "Earthquake, earthquake!!" The next thing I remember is that X, who was happily nibbling away from a pack of chips before, got up and grabbed Y with one hand who in turn grabbed Z and all three of them started running together. They ran and ran, they ran for their lives, kept running, and never looked back. Usain Bolt would have got a run for his money that day. But all this while, just like Hrithik Roshan who did not let go off the Indian flag while he was making the last climb at Kargil in the movie "Lakshya", X also clutched on to the pack of chips in a similar fashion. In the meantime S and T came and grabbed me and asked me to run for my life as well. I panicked and started running but then I remembered that I could not leave without my laptop. So there was a momentary

dilemma but within that fraction of a second, my very good friends had already set off without me. By the time I had picked up my laptop, the earthquake had already stopped. I don't remember when X, Y and Z returned. But I do remember the laughter and frolicking that incident induced on all our conversations for one week thereafter.

(2)

Evening of April 2, 2011. The TV room was so packed that even a fly could not get in. So we returned to our corridor, went to Z's room and watched the last few overs of the world cup final peacefully. There it was, Dhoni hitting the big six. Whole of Subansiri hostel erupted into claps and cheers and frantic celebrations. People were hugging, dancing, crying in joy and what not! We went out of the hostel and saw the entire institute had come out on the roads that evening. We roamed around the serpentine lake and discussed enthusiastically (with our limited knowledge about cricket) the exploits of India throughout the entire world cup. We came back and had dinner in the hostel canteen. Hostel food had never tasted better.

(3)

Diwali Mela, November, 2013. Some friends from Design Department had decided to put up a stall at the mela. The items to be sold were: Litti-chokha, chocolate cup-cakes and fresh lime soda. Apart from the litti which was ordered from outside, everything else was to be prepared by us. S's PhD supervisor was kind enough to lend us his personal microwave oven and permission was granted to turn one of the unused laboratories in their department into a kitchen for one day. Being the world renowned chef that I was at that time, I was asked not to have anything to do with the cooking part as it might be intimidating to the others. So, I was supposed to chop vegetables only and be the cashier once the stall is set up. Now after extensive planning, preparation and 12 hours of continuous labor, we set up a stall at long last, a tad bit later than we were supposed to...just 3 hours later not much. What a surprise! Our hot cakes actually sold like hot cakes and everything else too. Within 50 minutes, all our items were sold and we came back happily and started counting the money very enthusiastically. Net profit was some 15 rupees. But we were on cloud nine that day as all the food items had received immense positive feedback.

(4)

It was a cold week in the month of January/February of 2015. We the members of Lubdhak (a Bengali theatre group within the campus) were busy preparing for the production of the play "Solution X" by the famous playwright Badal Sircar. The Drama Club of IITG had just declared that there would be a

theatre festival on a weekend where four plays in four different languages would be staged and they had chosen Lubdhak for one of the projects. But we had only 15 days' time for the preparation. It was the first time we got a chance to stage a play at the main auditorium. Prior to that all our ventures were restricted to the mini auditorium only. Naturally the enthusiasm was huge, adrenaline was high and so was the chaos. Rehearsals would take place in the new SAC building; they would start at around 9 at night and continue till midnight. The female lead was on leave at home, so the rehearsals were going on without her. But a super talented gentleman in our group volunteered to act as her substitute until she returned. And the performance he would give during rehearsals, oh my! Almost felt like Meryl Streep has embodied Daniel Day-Lewis. But unfortunately the female lead returned in a few days and his reign came to an end (much to everyone's relief). Almost every other day we would treat ourselves with ice cream after the rehearsals from the newly opened Baskin-Robbins counter inside the building. Finally we would head towards our respective hostels, gorging on ice creams in the chilly cold winter night, singing songs and chatting happily. The play was staged finally on the scheduled day.....quite successfully. But those ten days of rehearsals constitute some of the best memories of my life at IITG.

(5)

September, 2016. The campus anecdotes would remain incomplete without mentioning the animals that were very much a part of our lives during our

stay there. So this incident occurred on a nice and warm morning, just two days prior to my defense seminar. My room had remained locked for about 10 months and was too dirty to set foot into. So I decided to stay in a friend's room. Let's call her W. W had gone out to take bath while I stayed in her room, opened the balcony door and with great concentration started making changes to my slides. Suddenly I heard some noise inside the room and looked up. A nice and healthy looking monkey was sitting right in front and watching me with great interest. I screamed and ran out of the room. Alerted by my scream, the other girls of the corridor came out of their rooms too and asked me what had happened. Upon hearing, one of the girls wasted no time and immediately ran towards the bathroom and shouted to W from outside, "Hey W, there is a monkey in your room!" Very calmly, W replied, "No that is not a monkey in my room that is Dishari di."

Now, when I look back at my life at IITG, I can only remember these little memories, these subliminal things in an otherwise mundane PhD life. It was the daily nothings that bound us together, made us laugh together and grow together. The little joys like waiting for home-made food when someone would come back to hostel after a visit from home or the late night Maggi cravings or the after dinner walks around the serpentine lake or the late night chats about life and relationships and what not still make me smile whenever I think about them. There were failures too in all our lives, PhD life is full of hurdles and failures; may not be as much as compared to

the struggles of post-PhD life but the hurdles were real. But what made it worthwhile was the fact that we all had each other. We still have. Now when I see these friends emerging high and shining in life, I cannot express in words how proud I feel.

In conclusion, as some people criticized and complained that the acknowledgment section of my PhD thesis might have been the worst ever in history, I wish to redeem myself. I would like to take this opportunity to mention that Saloni, Debopam, Naba da, Jhuma di, Chitralkha di, Namita di, Gayatri, Shibu da, Punit, Manideepa di, Raj Bhawan da, Ravi da, Swarup, Abhishek and so many others (who I might be forgetting to mention), all of you were great colleagues. A special note goes out to Core 1 bhaiyas and their wonderful alu parathas, Core 2 Bade Bhaiya and his tea and samosa which constituted our breakfast after every tutorial session at 8 in the morning, the go to people for anything and everything in the department Sridhar da, Santanu da, Pranpratim da and the ever-smiling Phatik da; they scolded us but at the same time also came to our aid whenever required and last but not the least Boudi outside KV gate and her delicious fish curry. Finally, a huge shout out to Madhu, Swathi, Neelam, Sunanda, Namami, Rama, Vikash, Venky, Mandar da, Himadri da, Shounak, Suman, Karnika, Pramit, Ramyani, Arnab da, Krishnanjan, (and so many others who I might be forgetting yet again), without whom the thesis writing would have been completed a year earlier.

[The author is a Post-Doctoral Fellow of Mathematics at IISER Mohali.]

A short IIT Guwahati diary

There are certain things in life that you should not do. Examples? Like you do not choose 'x' as a constant, like you do not choose 'c' as a variable, like you do not take a trip down the happier path of memory lane which you cannot walk again. But then again, as a proud practitioner of doing absolutely wrong things with utmost confidence; here I tell you my tales of IIT Guwahati.

So, I joined IIT Guwahati as a PhD student in the Mathematics Department in 2011. Hostel life was nothing new to me as I was accustomed to spending almost the entirety of my academic life in hostels since the 4th standard. But still, this was a different campus, an academic campus famous all over India for its mesmerizing beauty with its hillocks and lakes. I remember on my 3rd or 4th day in the campus, I found myself sitting in my hostel room one rainy afternoon with a cup of coffee, gazing through my window upon a hill that we passed by every single day on our way to the department. The sound of raindrops, two birds taking shelter on the shade just outside my window, a completely dark sky, and me - sitting in a dark hostel room with a cup of coffee. If it was possible, I would have paused that moment and played it in loops at least thousand times more. And luckily enough, the campus produced more such moments throughout

Debopam Chakraborty



my stay there, and I will forever be indebted for that. Eventually your eyes get accustomed to the beauty and you don't appreciate them the same way you did the first day you were introduced to this campus. But every now and then, a cloudy evening or a rainy morning would stop you and remind you what a privilege the campus was and still is to its residents.

Most of the people who have done PhD agree that PhD life can sometimes be stressful. So, many of them involve themselves with learning some life skills or acquiring some hobbies etc., to take their minds off things. Thanks to my PhD supervisor, who was the nicest person I have ever met in my whole life, my PhD life was far from being stressful. To utilize that to the fullest, I learned absolutely nothing useful in terms of honing my skills or in the pursuit of new hobbies, during my stay there. And I was generously accompanied by some of my wonderful seniors and friends and later I could mould a few of my juniors to the art of "doing absolutely nothing" too. To give an insight to this art, I can pose these following examples. We had invented games where people threw their keychains in an empty corridor for hours on end for a prize, had literally planned for lunch from the early hours of morning, and then for dinner from the moment lunch was finished. Apart from these, in a

collaborative work with one of my seniors, we had invented an absolutely pointless card game. Together we managed to make it popular enough to involve at least five more friends and seniors to duly waste the entirety of the night, night after night, for years! Though it would be a stretch to say that I wasted all my hostel-time on useless things, there were numerous occasions of wasting time on some not-so-ridiculous things like playing table tennis the whole night, or cricket every weekend, or numerous dinner parties (think something fancy at your own peril).

It is said that you can truly understand the importance of a place only after you leave it. The five years I have spent at IIT Guwahati, gave me a lot of things. And most importantly, mostly all of them were simple things. It gave me the chance to meet my wife who was my batch mate. The smiling face of every faculty and Sridhar Da's team including Phatik Da and Sourav that used to greet us in the corridors of the department. I am hopeful and quite sure that the

people at the hostel canteen and Core Shops still welcome every student with the same smile and warmth that I had faced every single day when I was there. Sometimes, amidst all the deadlines and teaching assignments and paper submissions, it still feels good to think that probably someone is still sitting alone in his hostel room in Brahmaputra hostel and watching the same raindrops falling from his window shade. Someone who is in a perfect place to fill his heart out with all the beautiful small moments in his life. Life will eventually move on and all we will be left with will be the precious IIT Guwahati diary that we have kept inside our heart. We will come back to it from time to time though, to meet our younger self. Thank you for being a generous host of one of the most beautiful parts of my life.

[The author is an Assistant Professor of Mathematics at BITS Pilani, Hyderabad Campus.]



Picture shared by the author

A golden era of my life

My journey at IIT Guwahati started from 2009 as a student of MSc programme in Mathematics and Computing. The very first day, walking from the KV gate to Siang hostel with a lot of luggage in an extreme hot summer, was not a very good first experience for me. Mind got changed within a day which was a rainy day once I saw this view from Siang hostel and could not resist myself to frame it in my mobile.



Abhishek Das

With lots of friends from different cultural and language background made me cherish the life at IIT Guwahati. While doing my master's project, I got in touch with my guru who used to encourage me to pursue PhD. After finishing my MSc degree, I always wanted to go back to IIT Guwahati to pursue my research under him. And that became true within a year. It is not that life was smooth after getting into PhD; in fact, sometimes it was too difficult. Constant support from some teachers made it possible for me to survive. As we know, to get something one has to sacrifice something. And I believe that is true indeed. I got plenty of scope to enrich my knowledge. I must say about central library which has an excellent collection along with the subscription of almost all reputed journals. The computational facility which was provided at IIT Guwahati is adequate for me - I got all the support from computer lab staff to pursue my research which required a high end computing system.



Picture shared by the author

The residential life I got there was very peaceful and enjoyable. Facilities of small playground inside the hostel made the hostel life enjoyable. The campus used to be very active during Alcheringa and Techniche. The authorities of the institute always tried to make my stay at campus as comfortable and as memorable as possible. I got very helpful and friendly seniors as well as juniors. It is worth mentioning that I got many friends during that tenure who made my life much easier. I got myself involved in several activities together including roaming inside and outside of the campus, sports, parties etc.

Regarding the nature of the campus, I believe, with the majestic Brahmaputra on one side and with hills

and vast open spaces inside, God has given everything to this campus to look beautiful and it is being maintained so nicely. The campus provided a combination of peace and resourcefulness that are essential ingredients to successful learning and innovation. I was lucky to have spent seven precious years of my life at IIT Guwahati, which encouraged me to invest myself in the pursuit of excellence. It was really a lifetime experience which probably cannot be expressed just through some mere words. **[The author is an Assistant Professor of Mathematics at VIT Vellore.]**

Pensive reminiscences

My journey at IIT Guwahati began in July, 2009 when I was admitted for my MSc degree. I still remember feeling stunned, awe-struck and very miniscule in front of the majestic scenic beauty of the campus. On entering the (at the time, only) girls hostel, Subansiri, I was told that I was instead assigned to stay at the Married Scholars' Hostel. Convinced that my erudite appearance and dignified demeanor had added years of wisdom to my face, I was crest fallen to realize that it couldn't be farther from the truth. I was only being sent there because there were no vacancies in Subansiri.

Living in the Married Scholars' Hostel was my first time with roommates, in fact, the first time I had lived outside my home. Even though we shifted to Subansiri soon after, I have very fond memories of the Married Scholars' Hostel – whether it was waiting with a plate, loaned by one of my roommates, for breakfast and dinner to arrive (which it would, by cycle no less!), or trying to (unsuccessfully) hone my pillion riding skills. Life in Subansiri was a roller coaster of emotions - tears, laughter, and a lot of fun. I was lucky to be surrounded by a group of friends with whom I could discuss all things - academic and personal. Gabbing away for hours, watching movies huddled together,

Gayatri Panicker



cycling to and from the academic block, it feels like two years passed by in a flash.

When those two years came to an end, and I stayed on to pursue my PhD degree from IIT Guwahati, I felt bereft in the initial couple of months. It took a little time to get accustomed to the change from being one in a crowd to being a solitary trooper. However this change led to a strengthening of old friendships and forging of new ones.

My PhD days involved discussions with my supervisors (academic), discussions with my batch mates (non-academic), endless coffee trips to the Core 2 coffee shop, eating delicious aloo parathas from the Core 1 coffee shop, oh, and research as well. The sometimes grueling days of pursuing a PhD were made slightly less so with the support of friends and the aforementioned activities.

A huge part of why I have fond memories of IIT Guwahati would be the faculty of the Mathematics Department. From always welcoming and encouraging discussions and questions in their lectures, to providing a sounding board for ideas and opinions, and being incredibly supportive through academic hurdles, the faculty are a tremendous boon to the students. The faculty always made me feel that I was 'heard', and that my suggestions or grievances

mattered. I appreciate this so much more as I've grown older. I hate to admit, but once I had got into a minor verbal skirmish with another faculty member, however the course instructors smoothed over ruffled feathers on both sides, without making me feel less than, or on the back foot because I was a mere research scholar. This too, when I was kind of the one at fault. When tempers were soothed, I did apologize to the concerned faculty member, who very graciously accepted my apology. I hope that I show the same graciousness and level-headedness that was shown to me, if and when I am in a place of authority. I also owe a huge debt of gratitude to my supervisors, for always offering a balanced, pragmatic perspective on issues that I was facing.

An integral part of any department is its staff, and in IIT Guwahati, the Mathematics Department is blessed

in that category. An ever-smiling Phatik Da, always ready to help, delightful Sridhar Sir, who would try to be strict and fail miserably, and of course Santanu Da and Pranpratim Da who would immediately assist us whenever we were faced with a computer snafu.

When I think of my time at IIT Guwahati, I am filled with sweet memories, some sad, many happy, but all sweet nonetheless. IIT Guwahati has been, and will remain, a huge, integral part of my life, not only for the experiences I've had, but also due to the fact that this was the place where I met my husband. I will always be grateful to IIT Guwahati, and to the Mathematics Department, in particular, for everything it has taught me in maths and in life.

[The author is a Post-Doctoral Fellow of Mathematics at IIT Kanpur.]

PhD life: A personal view

PhD is full of uncertainty. Getting a dream institute, supervisor and research area is a rare combination. If you are not getting the above said combination, then prepare yourself well once your journey of PhD begins. In maximum cases, we actually do not know which research area we want to work in, but area of interest is a very common question in the PhD interview. Interest in some subjects probably cannot replicate your research interest. When you go deeper into the particular research area, you will realize that it is not suited for you, but this realization may take more time and during that time you cannot go backward, so you have to move forward without your interest getting the attention it should have got. A supervisor who can

Ankur Kanaujiya



help you when you have already taken a wrong decision during PhD is good supervisor. Once you have decided to work under someone, then believing in yourself and in your supervisor is very much important. An unofficial member of your PhD doctoral committee is also required who can be your good friend - who motivates you time to time during PhD. In brief, PhD teaches us how to deal with all the phases of life (glimpse of our whole life), which we are going to use for the rest of our lives.

[The author is an Assistant Professor of Mathematics at NIT Rourkela.]

My fascination

My fascination for Department of Mathematics, IIT Guwahati had begun well before applying for PhD through a friend. I had heard a lot of appreciation for the department and the institute as a whole. So, with full of anticipation, I submitted my application for a PhD position in IITG and got selected. It was the summer of 2013 and this is how my unforgettable journey at IIT Guwahati started.

Ramesh Prasad Panda



As the case with most PhD students, my research career also went through several ups and downs. However, the constant encouragement and support of my supervisor helped immensely as a researcher. I was also lucky to have some wonderful friends and seniors in the department. In all those years, their presence made things a lot smoother and enjoyable for me. Since life as a researcher can be stressful, the

natural beauty of IIT Guwahati was like a blessing for us. With the mighty and majestic Brahmaputra River flowing beside the campus, presence of the lakes and lush green hills, the campus provides a perfect environment for research and learning. I will always be indebted to IIT Guwahati for its pivotal role in shaping my life from the academic as well as from personal standpoint.



*Intra IIT Latex Workshop organized by Dept. of Mathematics on 18.02.2017:
Pictures shared by the author*

[The author is a Post-Doctoral fellow of Mathematics at NISER Bhubaneswar.]

I will forever be grateful

I finally got the opportunity to express the gratitude and respect that I have in my heart for this institution. IIT Guwahati has a special place in my heart for it has been a turning point in shaping my identity as a research enthusiast.

Maneesh Kumar Singh



It has been a memorable journey as a researcher working with an eminent personality in my field as my guide. His great guidance and invaluable lesson during PhD is one thing that still fuels my research at IISc Bangalore. I continue to work with him even

now. In the lone journey of research, his informal support and caring nature has nourished our precious bonding which continues to grow with each passing day.

Apart from my guide, another precious gift to me given by this institute is unforgettable friendships. Amidst this lush green campus, I have enjoyed the company of some of the best people I have met. We used to spend most of our time in the lab (with its fond memories



Picture shared by the author

of night stays) sharing research ideas, counseling each other, or simply chatting. We used to go for swimming and walking long miles together -talking life and future basking in the beautiful sunset of the campus. The bank of Brahmaputra River has been a peaceful resort to us, researchers, on weekends with its almost spiritual and meditative vibes cleansing us of all mental conflicts and worries. Traveling far off terrains in our trip to Meghalaya and Gangtok has

given me some beautiful life experiences which still makes me nostalgic at times.

I have been fortunate to have had the chance of completing my doctorate in this institution. Once again thank you Department of Mathematics, IIT Guwahati!!!

[The author is a Post-Doctoral fellow of Mathematics at IISc Bangalore.]



Picture shared by the author

The song has ended, but the melody lingers on

“IIT Guwahati” – the reminiscence of the word pours my mind with peace and happiness. It is exactly two years since I have left the campus. I passed four and half years of my life in IIT campus as a research scholar. It is the place where I identified- my spirit, my likes, my dislikes, my inner voice, my weakness and my strength. In other words, it provided me enough strength and vigor to identify myself. The serene and calm environment of the campus taught me the meaning of silence and tranquility- which in a way strengthened my ability to think.

I still remember my way to the department from Subansiri Hostel on a cycle. When my “Lady Bird” used to pass through the lakes, the hills, the Auditorium, the central library, the lecture hall complex, I could witness the natural resplendence of the campus. How might I overlook those nippy evenings of May when I needed to envelop myself with a blanket? The climate in IIT grounds is a genuine euphoria for students.

My cubicle in the research scholars’ room was just in front of the door. The majority of my kindred associates tended to look around my work area before sitting in their respective seats. During that season of jabbing, we used to have a decent tattle on any trifling or genuine issues. In a flash, while doing a job for my bread and butter whenever I get stuck in some

Koyel Chakravarty



assignments, I feel nostalgic to think that how the seniors and juniors cheered us up whenever we faced any difficulties.

If I don't say about my teachers, that will be a serious offence. My self-dependence regarding my research, regarding my presentation skills, regarding my teaching skills are the gifts that my teachers have given me in their way of training.

While in the campus, I was fortunate enough to witness some of the maestros performing in our auditorium, Pandit Hariprasad Chaurasia, Pandit Ajoy Chakraborty, Pandit Viswa Mohan Bhatt, to name a few. These occasions which I witnessed will remain in me as my lifetime treasures.

During my solitary days in the hostel room, I spent a plethora of time reading story books, optically canvassing movies in integration to my studies. I had relished my life to the fullest. Today when I am very diligent with my job and family life, I genuinely miss my “off the beaten track” spirit. Those days of research life in the IIT campus was full of paper rejections and final acceptances. Those days fortified my spirit of tackling difficulties in life's long run. It is the grace of the Almighty that I got an opportunity to study at IIT Guwahati and developed my personality to withstand

the torrential convivial and professional field in a balanced way.

Lastly, I really miss the “breakfast of Subansiri Hostel” especially on Sundays, when there used to be long queues to get a large “masala dosa” in the food plates. Wrapping up, I optate to thank my teachers whole-

heartedly for giving us such a nice opportunity to inscribe about our feelings during our campus life.

[The author is an Assistant Professor of Mathematics at The ICFAI University Tripura.]

The golden moments of my life spent at IIT Guwahati

The day was really memorable for me when I entered the campus of IIT Guwahati for the first time. In my view, this is the most beautiful campus among all IIT's. I was literally overwhelmed by the beauty, cleanliness and greeneries of the campus. There are lots of trees, small and large hills, a number of lakes in the campus and the long winding path that runs along the side of the lakes and the hills encircling the entire campus. The mighty river 'Brahmaputra' flows alongside. Every time I saw the view of the whole campus from the viewpoint, I felt a heavenly bliss.

The first thing that comes to my mind while describing the academic aspect is how friendly and helpful the teachers were. I was really fascinated by every teacher's sincere explanation of every topic in the class. They gave equal importance to each student. They gave each student his/her own freedom to ask any questions or doubts without any hesitation. Their teaching was just not limited within the classroom, they also set aside time outside the classroom to help students clear their doubts. My description of teachers would be incomplete if I don't say about my PhD supervisor, Prof. Rajen Kumar Sinha. He is the calmest and wisest man I have ever met. From him I have received all the support of my academic career and I



Tamal Pramanick

have learned a lot from him. This adequate achievement of my life would never have been possible without him.

Apart from this, I also remember the memories of the departmental computer lab where I got all the facilities to learn programming. My programming skill development would not have been possible without this lab facility. In addition, there was the Institute Computer Lab and the Central Library in the campus. The beautiful building of the central library right in the middle of the campus adds much to the beauty of the campus. Every useful book and journal could be accessed from the central library. Also, the memory of watching many cultural programs sitting in the auditorium of the institute is still fresh in my memory. Next, those who come to my mind are my friends, juniors and seniors. My IIT life would not have been so colorful without them. I still remember spending hours and hours with friends and seniors doing a group study at the hostel. And what I liked most was the sports complex that was accessible to all faculties and students. Everything was there such as cricket ground, football ground, volleyball court, basketball court, hockey ground, Gymkhana and Badminton court etc. It was a very happy moment for me to be able to take

part in the inter-hostel cricket and football tournaments every year. Moreover, it was a pleasing moment for me to have taken part in the inter-departmental cricket tournaments.

But the most exciting event we waited with enthusiasm throughout the year was the departmental cricket match between faculties and students. In this cricket tournament, the most watched moment was how friendly each of the teachers was while playing with the students. A few pictures of those matches still refresh my memory. I also remember when our students and teachers used to come together at one place for dinner party for various program purposes, such as a departmental course completion party, senior's party for PhD completion, various workshops and conference get together party, fresher's party and many others. We used to enjoy a lot of those events which also gave us opportunity to discuss various issues with the teachers. The biggest example of teachers and students coming together was the departmental picnic that took place every year to different beautiful places in Assam. Different students were given different responsibilities for successfully organizing the picnic, which we all used to do very sincerely. The teachers also helped us a lot to organize the picnic properly. There were no boundaries between teachers and students on the day of the picnic and all used to maintain an equal decorum with each other. All the teachers and students used to play, eat and roam

together at the picnic spot. Overall, this departmental picnic brought a different level of joy every year.

The next thing to talk about is the two biggest student fest of northeast that are held at IIT, one is Techniche and the other is Alcheringa. Techniche is the annual Techno-Management festival of IIT Guwahati usually conducted at the end of August each year for three days and four nights. It seeks to provide school, college and university students a platform to build fundamental experience and knowledge through a series of events involving mental aptitude, logic, and dexterity. Alcheringa, also known as "Alcher", is the annual cultural festival of IIT Guwahati conducted towards the end of January every year for three days and four nights. Students from various schools, colleges and universities from the Northeast as well as India get the opportunity to show their different talents in Alcheringa. Some notable Indian and foreign artistes perform at Alcheringa every year. This event is an unprecedented blend of education and culture. The memory of these two programs will forever be etched in my memory.

The seven years that I spent at IIT Guwahati were the golden days of my life. Those days of my life will be missed forever. Even today, whenever I think of all these memories, it gives me immense joy and pleasure.

[The author is an Assistant Professor of Mathematics at NIT Calicut.]

A decade in the Hyperbolic Time Chamber¹

On day one, a naive teenager stepped on the threshold to enter the beautiful campus of IIT Guwahati after clearing IIT-JEE, touted to be one of the toughest engineering entrance exams. As the sun is just one of many stars in the galaxy, realization struck that I arrived at a broader stage while I was stargazing on top of the viewpoint at midnight as part of the astronomy club.

As a slightly mature teenager on day two with little experience, I regularly paced along the corridors of the Department of Mathematics trying to find the most exciting topic. An internal struggle ensued between number theory and algorithms, but cryptography won on day two.

Day three amplified my passion for coding as well as more visits to the Department Lab for group projects. The interactions with the faculties evolved from just showing up in the class to hour-long discussions. Day three ended with a visit to Japan, the country where the hyperbolic time chamber originated to study cryptography.

As I was floundering through the job interviews at the noon of day four, it was clear to me what I wanted to do as I said, "I was intrigued by research", to one of the interviewer. The "Dr." prefix had been one of the



Debasish Pattanayak

fascination since my early school days. My BTP supervisor suggested that I could also apply for the PhD program at IITG during one accidental meet in front of ATM. By the end of day four, I was both an alumnus and a fresh PhD student of the same department.

The transition at the beginning of day five was minimal, as I spent the day without much change compared to my undergraduate days. There was an anxiety of not following the footsteps of my classmates/seniors, but my excitement towards the new research topic had overshadowed it. However, it had shifted my focus from mathematics to computer science. The sense of loss from missing my old friends was eased with the visit to Sikkim with fellow researchers.

Day six brought me closer to my PhD supervisors and the time spent in discussing academic as well as extra-academic things was a monotonically increasing function. The disappointment from the first rejection, the enthusiasm from meeting with other researchers in my field and the exciting problems served as the cornerstone as I built my foundation.

The elation of acceptance on day seven brought confidence along with it. The feeling of being lost in

¹ Décade (French) is a period of ten days. A year in the Hyperbolic Time Chamber is equivalent to a day outside.

the difficulty of the problem subsided swiftly as my supervisors and other fellow students were apt in mental support. It also taught me that thinking alone in a hyperbolic time chamber would not lead to solutions. A completely unrelated casual remark from a person unaware of your problem can be the light at the end of the tunnel.

I broadened my horizons as I worked through day eight with confidence to boot. Collaborations and remote meetings filled my daily schedule along with regular TA duties. I realized that there are times, once you find the missing piece of the puzzle everything falls into place. The regular reminders from my supervisors served as a medicine for my chronic procrastination. Only IITG had the geographical location to facilitate a cross-border lunch at Bhutan, while it also acted as a central hub to the entire northeast of India. The trips to Shillong and Cherapunjee was an icing on the cake.

Day nine was in a constant hyperbole. There was an urgency of the upcoming deadline in addition to the long nerve-wracking waiting periods of journal reviews. The soothing harmony of birds on winter mornings at Brahmaputra riverbank with slight drizzling eased the burdens. Walks along the lakeside inside the campus at midnight were the perfect recipe for a clear mind and deep thinking. The escapades to nearby river islands on cruises were my favorite.

I spent the first half of day ten away from IITG at the University of Vienna under the SERB fellowship. I never thought that I would miss the regular mess food of the hostels. On my return to IITG, it was a couple of highly stressful but blissful months until the pandemic. I was longing for the taste of coffee at the core shops after having drunk coffee at Austrian Cafés. The end of day ten was so different from the expectation. Well, reality shows that one cannot control the future, but always has to adapt to it. While I was presenting the slides of my defense online over video conference, the thought of a filled seminar room at the Department of Mathematics was constantly lingering on the back of my mind.

The goal of night-outs changed from completing assignments to meeting conference deadlines. The meaningless banter after dinner transformed to debate over technological progress. As a pupa transmogrifies into a butterfly leaving behind the cocoon, the naïve teenager from day one has stepped out to the world leaving the beautiful campus. I also saw the transformation of the campus as it continued to grow out of its shell to spread its wings. I am sure that the experience of the past decade would be the foundation that shapes my future. Needless to say that IITG would definitely play a role in building the future of many naïve teenagers in the years to come.

[The author is a Visiting Scientist at ISI Kolkata.]

Reconstruction of old memory

Sometimes you will never know the value of a moment, until it becomes a memory.

--By Dr. Seuss

How often do we feel fortunate? Now when I look back at my IIT Guwahati journey, I feel lucky because I have met many helpful seniors throughout this journey. It's never easy for a person who has spent most of his years of education in a rural area to catch the flow of mainstream in a highly prestigious institution just after graduation. I joined IIT Guwahati in 2013 as an MSc student in Mathematics and Computing. At the very beginning of our first semester, I faced difficulty in a Discrete Mathematics course. At that time, a research scholar helped me by making me realize that the way I was reading the subject is not correct. He was the first person who made me realize that "Mathematics is not about how many problems you solve but how you react when you see a new problem." After that, I do not know how many times I knocked on their door, especially during the exam. But every time they helped me and guided me.

After completion of my MSc when I joined IIT Guwahati again as a research scholar, they were there to welcome me and my friends. Their valuable advice and suggestion not only helped us to choose our Supervisors but also helped us to overcome the

Rakesh Jana



difficulties that we are supposed to face in the near future.

Most of my seniors used to stay at the research scholar's office. They created such a beautiful learning environment inside the research scholar's office that you would not lose your focus from studying. To relax our mind, we often used to go for tea and snacks at Core I shop. During that time, we exchanged our ideas, discussed mathematics, and shared our views on many topics. Sometimes a silly mathematical discussion led us to a joyful mathematical discovery.

During my third semester of my PhD, Department of mathematics assigned me a tutoring job. I was very nervous at that time. It was mainly because of two reasons; first was I was not very fluent in English, and second was that it was the first time I was going to take



Holi Celebration 2017: Picture shared by the author

any class. My seniors, who were also assigned to the same jobs, shared their past tutoring experience with us and guided us how to be a smart teacher inside the classroom.

Our seniors used to organize research scholar talks where we gave a talk in front of them just one month



After a friendly Cricket match: Picture shared by the author

before our State-of-the-Art-Seminar (SOAS). They gave us this stage to improve our presentation skills. They pointed out our mistakes and gave their feedback on how we can improve. This practice helped many of us to deliver a fascinating talk on our actual SOAS presentation. Apart from this, they also used to organize discussions where they delivered a series of talks in some particular area. As a fresher, this not only gave us an exposure to learn different types of areas of Mathematics but also helped many to choose their research area.

Every Sunday afternoon we used to play cricket together in Brahmaputra hostel cricket ground. It helped us to start a fresh week by alleviating mental

exhaustion from a monotonous week-long study. This game of cricket has given us many beautiful moments. Each time our game ended with a pretty friendly fight. But after the game, anger and arrogance got dissolved during the evening tea at Faculty Gate. These beautiful moments are still alive in my memory.

We together share many beautiful moments but the moments from Holi celebration are epic. It gives ultimate joy when we pull some of our friends from their hostel room who did not want to play Holi. After that, we used to play Holi with our respective faculty members. I am sure, like us, our teachers also wait for us on such days.

It is of my proud privilege to think about the companions of all the mates and seniors of IIT Guwahati. I convey my heartiest congratulation and best regards to all of them standing on the verge of the last moment in the IIT Guwahati.

I want to conclude I express my deep sense of gratitude to the souvenir committee of the Alumni Symposium on Mathematics and Computing 2020 for allowing me to thank my seniors for their endless inspiration and motivation during my IIT Guwahati journey. Last of all many thanks to all the learners, faculty members and staff associated with the IIT Guwahati for everything you have given me. I treasure all these memorable moments of IIT Guwahati in my mind forever.

[The author is a Senior Research Fellow in the Department of Mathematics at IITG.]

Photo Collage (2019)



Picture shared by Rakesh Jana

Recollecting memories with seniors



Somnath Ghosh

My IIT days started as an MSc student in the year 2013. The first few days passed by enjoying the beauty of one of the most beautiful campuses across the country. In the meantime, we often interacted with some seniors, as we were staying in the same hostel Dibang. Every time after the announcement of quiz or midsem dates, we reached their rooms to boost our confidence. They helped us by sharing their experience and offering previous question papers and notes. It is worthwhile to mention the importance of their suggestions, as they had overcome the same difficulties that we were supposed to face in near future. Except from the academics, I have got mental freshness in different ways, such as by getting treats from them or celebrating different festivals together with them.

In the final semester of MSc, we had a few classes in a room adjacent to the new research scholar room. Often, when we passed the research scholar room, we told each other that after a few days some of our classmates would have a seat here. Finally, it happened and together with some of my friends, I was selected as a research scholar at the department. Being an MSc student in the department, I had interaction with some of the PhD seniors. Once I was discussing with one of them about the fact that we were now free from the pressure of getting good grades. He agreed with me

and said that PhD is all about proving yourself, whether you can add at least an epsilon in literature. He also added that one would experience different types of failures but what would make one to get the degree was how one dealt with these to move forward. At the time of evaluating exam copies of the core courses with the seniors, I learned how to be uniform with a large number of students.

Although this write-up is for the alumni symposium, it will be incomplete if I don't share anything about our department faculty members. The first impression about them is made from the classroom. It is needless to mention about their helping hands as well as interaction in class. But I am pleasantly surprised to notice that the instructors come before the class starts and wait outside the class room for the previous class to be over. There are many more such incidents, but I want to conclude this by mentioning that the amount of support I got from the faculty members is incomparable.

I want to thank the souvenir committee for giving me this opportunity, to thank my seniors for their endless inspiration and motivation throughout my IITG journey.

[The author is a Senior Research Fellow in the Department of Mathematics at IITG.]

A token of gratitude to my seniors



Shamik Das

Expressing my gratitude to my seniors and to write about their contribution in my academic journey, that too in just a page, is really a tough job for me but I am glad that the souvenir committee has given me an opportunity like this.

It was July 2014 when I got the opportunity to join this prestigious institute, IIT Guwahati, as an MSc student in the department of Mathematics and certainly it was one of the happiest moments of my life. Encountering people from different linguistic background and the atmosphere of the multicultural classroom developed my personality in a positive way. Our institute has this tradition of organizing surprise tests, quizzes frequently which we were dreadful about, but the constant support and suggestions from our seniors helped us deal with the challenge. In fact, their guidance helped us to qualify some of the toughest exams like NET, GATE and NBHM etc.

Not only my MSc journey but my research journey is also incomplete without their companionship. In fact it were some senior scholars who gave me the vision about research in our field and I aspired to be like them someday and luckily I was selected as a research scholar of our department in 2016. It is a very typical concept that life of PhD students is very tedious, tiresome and one has to deal with a lot of mental pressure for quite a long period of time. But to my

surprise. My PhD journey till now has been quite smooth, all because of the support of my guide and senior scholars. For example I am fond of cricket and have represented IITG Cricket team as the wicket-keeper batsman in various tournaments. My guide and colleagues have always encouraged me to pursue my passion for the sport and they would often attend my big matches to cheer me up. Once I was told by a faculty member, "PhD is not only for publishing some reasonable number of articles but it is a training period for a student to become a successful teacher." During our teaching assistantship, I have learnt some elegant ways of teaching from corresponding course instructors and seniors. Apart from academics, we celebrate all the religious and cultural festivals like an extended family. The institute fests like 'Alcheringa', 'Techniche' and departmental picnics have made our bonding even stronger. On weekends, we indulge in different types of games like cricket, football, table tennis, cards, so we never feel like we are living far away from our families here.

Now I am a senior research scholar and almost all of my seniors have completed their doctorate and are placed in various esteemed organizations throughout the world. We are still connected through social media platform but our bonding is beyond that.

I lack enough phrases as I am running out of vocabulary to describe the scenic beauty of our extensively vast campus and the extremely friendly

seniors and faculty members who made this whole journey worth remembering.

[The author is a Senior Research Fellow in the Department of Mathematics at IITG.]

List of Alumni

Sl.No.	Name	Year	PhD Supervisor(s)	E-mail	Current/Recent Position
1	Shabeena Ahmed	2002	Meenaxi Bhattacharjee	Data Not Available	
2	Shreemayee Bora	2002	Rafikul Alam	<i>shbora@iitg.ac.in</i>	Professor, IIT Guwahati
3	Jiten C Kalita	2002	Durga Charan Dalal and Anoop Kumar Dass (<i>Mechanical Engineering</i>)	<i>jiten@iitg.ac.in</i>	Professor, IIT Guwahati
4	Bhupen Deka	2006	Rajen Kumar Sinha	<i>bdeka@iitg.ac.in</i>	Associate Professor, IIT Guwahati
5	Sasmita Barik	2007	Sukanta Pati	<i>sasmita@iitbbs.ac.in</i>	Associate Professor, IIT Bhubaneswar
6	Swapan Kumar Pandit	2007	Durga Charan Dalal and Jiten C Kalita	<i>swapankumar.pandit@visva-bharati.ac.in</i>	Assistant Professor, Integrated Science Education & Research Centre, Siksha-Bhavana (Institute of Science), Visva-Bharati, West Bengal
7	Subash Chandra Martha	2007	Swaroop Nandan Bora	<i>scmartha@iitrpr.ac.in</i>	Associate Professor, IIT Ropar
8	Tarakanta Nayak	2007	M. Guru Prem Prasad	<i>tnayak@iitbbs.ac.in</i>	Associate Professor, IIT Bhubaneswar
9	Milan Nath	2008	Bhaba Kumar Sarma	<i>milan@tezu.ernet.in</i>	Professor, Tezpur University
10	Sk. Safique Ahmad	2008	Rafikul Alam	<i>safique@iiti.ac.in</i>	Associate Professor, IIT Indore
11	Bibhas Adhikari	2009	Rafikul Alam	<i>bibhas@maths.iitkgp.ac.in</i>	Assistant Professor, IIT Kharagpur
12	Madhusmita Tripathy	2009	Rajen Kumar Sinha	<i>mtripathy09@gmail.com</i>	Assistant Professor, Andhra University, Visakhapatnam
13	Rajendra Kumar Ray	2009	Jiten C Kalita	<i>rajendra@iitmandi.ac.in</i>	Associate Professor, IIT Mandi
14	Smrutiranjana Mohapatra	2009	Swaroop Nandan Bora	<i>smrutiranjana.m@gmail.com</i>	Assistant Professor, Veer Surendra Sai University of Technology, Burla, Odisha
15	Akhilesh Kumar	2009	Durga Charan Dalal	<i>akhileshisac@gmail.com</i>	Scientist/Engineer-'SE', Space Navigation Group, U.R. Rao Satellite Centre, ISRO Bengaluru

Sl.No.	Name	Year	PhD Supervisor(s)	E-mail	Current/Recent Position
16	Rupam Barman	2010	Anupam Saikia	rupam@iitg.ac.in	Associate Professor, IIT Guwahati
17	Kaushik Mukherjee	2010	S. Natesan	kaushik@iist.ac.in	Associate Professor, Indian Institute of Space Science and Technology, Thiruvananthapuram
18	Jugal Mohapatra	2010	S. Natesan	jugal@nitrkl.ac.in	Associate Professor, NIT Rourkela
19	Rajesh Pratap Singh	2010	Bhaba Kumar Sarma and Anupam Saikia	rpsingh@cub.ac.in	Assistant Professor, Central University of South Bihar, Gaya
20	Cosmika Goswami	2010	N. Selvaraju	cosmika.goswami@gmail.com	Bioinformatician, University of Glasgow, UK
21	I. Venkat Appal Raju	2011	N. Selvaraju	vasuraju47@gmail.com	Assistant Vice President, HSBC
22	Debajit Kalita	2012	Sukanta Pati	kdebajit@tezu.ernet.in	Assistant Professor, Tezpur University
23	Shuvam Sen	2012	Jiten C Kalita	shuvam@tezu.ernet.in	Associate Professor, Tezpur University
24	Shubh Narayan Singh	2012	K. V. Krishna	shubh@cub.ac.in	Assistant Professor, Central University of South Bihar, Gaya
25	Ravi Srivastava	2012	Shreemayee Bora	ravi@nitsikkim.ac.in	Assistant Professor, NIT Sikkim
26	Pratibhamoy Das	2013	S. Natesan	pratibhamoy@gmail.com	Assistant Professor, IIT Patna
27	Biswajit Deb	2013	Kalpesh Kapoor	biswajit.d@smit.smu.edu.in	Associate Professor, SMIT, Sikkim Manipal University, Majitar, East Sikkim
28	Manideepa Saha	2014	Sriparna Bandopadhyay	manideepa.saha@nitm.ac.in	Assistant Professor, NIT Meghalaya
29	S. Gowrisankar	2014	S. Natesan	s.gowri@nitp.ac.in	Assistant Professor, NIT Patna
30	G. Murali Mohan Reddy	2014	Rajen Kumar Sinha	gmuralireddy1984@gmail.com	Assistant Professor, BITS Pilani, Hyderabad Campus
31	Jitender Kumar	2014	K. V. Krishna	jitenderarora09@gmail.com	Assistant Professor, BITS Pilani, Pilani Campus
32	Namita Behera	2014	Rafikul Alam	niku.namita@gmail.com	Assistant Professor, Sikkim University
33	Raj Bhawan Yadav	2014	K.V. Srikanth	rbyadav15@gmail.com	Guest Faculty, Sikkim University

Sl.No.	Name	Year	PhD Supervisor(s)	E-mail	Current/Recent Position
34	Santu Das	2014	Swaroop Nandan Bora	<i>d.santu@iasst.gov.in</i>	Assistant Professor, Institute of Advanced Study in Science and Technology, Guwahati
35	Mohammad Hassan	2014	Swaroop Nandan Bora	<i>mdhassan000@gmail.com</i>	Assistant Professor, North Eastern Regional Institute of Science and Technology, Arunachal Pradesh
36	Sunanda Saha	2014	Swaroop Nandan Bora	<i>sanita1234@gmail.com</i>	Assistant Professor, VIT, Vellore Campus
37	Dinesh Kumar	2014	Siddhartha Pratim Chakrabarty	<i>jangiriitg@gmail.com</i>	Post-Doctoral Fellow, IISc Bangalore
38	Bidyut Bikash Gogoi	2014	Jiten C Kalita	<i>bidyut@urisc.gov.in</i>	Scientist E, ISRO, Bangalore
39	Kaushik Mondal	2015	Partha Sarathi Mandal	<i>kaushikmondal.85@gmail.com</i>	Assistant Professor, IIT Ropar
40	Jhuma Sen Gupta	2015	Rajen Kumar Sinha	<i>jhumagupta08@gmail.com</i>	Assistant Professor, BITS Pilani, Hyderabad Campus
41	Kalyan Sinha	2015	Bhaba Kumar Sarma	<i>kalyansinha90@gmail.com</i>	Assistant Professor, A.B.N. Seal College, Coochbehar Panchanan Barma University, West Bengal
42	Neelam Choudhary	2015	Swaroop Nandan Bora	<i>neelam.choudhary@bennett.edu.in</i>	Assistant Professor, Bennett University, Greater Noida
43	Barun Gorain	2015	Partha Sarathi Mandal	<i>barun@iitbhilai.ac.in</i>	Assistant Professor, IIT Bhilai
44	Punit Sharma	2016	Shreemayee Bora	<i>punit.sharma@maths.iitd.ac.in</i>	Assistant Professor, IIT Delhi
45	Swarup Kumar Panda	2016	Sukanta Pati	<i>pandaswarup.math@gmail.com</i>	Assistant Professor, IIT Kharagpur
46	Kalyan Manna	2016	Siddhartha Pratim Chakrabarty	<i>kalyan274667@gmail.com</i>	Institute Post-Doctoral Fellow, IIT Kanpur
47	Manjanna B.	2016	Gautam Kumar Das	<i>uvce20@gmail.com</i>	Assistant Professor, BITS Pilani, Hyderabad Campus
48	Shibsankar Das	2016	Kalpesh Kapoor	<i>shib.iitm@gmail.com</i>	Assistant Professor, Banaras Hindu University
49	Dishari Chaudhuri	2016	Anupam Saikia	<i>dishari@iitg.ac.in</i>	Post Doctoral Fellow, IISER Mohali
50	Debopam Chakraborty	2016	Anupam Saikia	<i>debopam112358@gmail.com</i>	Assistant Professor, BITS Pilani, Hyderabad Campus
51	Himadri Nayak	2017	Kalpesh Kapoor	<i>himadvn@gmail.com</i>	Assistant Professor, IIIT Bhagalpur

Sl.No.	Name	Year	PhD Supervisor(s)	E-mail	Current/Recent Position
52	Kumari Saloni	2017	Anupam Saikia	<i>sin.saloni@gmail.com</i>	Assistant Professor, IIT Patna
53	Md. Nasim Akhtar	2017	M. Guru Prem Prasad	<i>nasim.iitm@gmail.com</i>	Assistant Professor, Presidency University, Kolkata
54	Chitralekha Sarkar	2017	Durga Charan Dalal	<i>chitralekha.math@gmail.com</i>	Assistant Professor, Rampurhat College, West Bengal
55	Hiranmoy Pal	2017	Bikash Bhattacharjya	<i>palh@nitrkl.ac.in</i>	Assistant Professor, NIT Rourkela
56	Abhishek Das	2017	S. Natesan	<i>abhishekdas.iitg@gmail.com</i>	Assistant Professor, VIT, Vellore Campus
57	Anirban Majumdar	2017	S. Natesan	<i>anirban.math.iitm@gmail.com</i>	Assistant Professor, NIT Nagaland
58	Arnab Ghosh	2017	Rafikul Alam	<i>arnabghosh.maths@gmail.com</i>	Assistant Professor, The ICFAI University Tripura
59	Gayatri Panicker	2018	K. V. Krishna and Purandar Bhaduri (Computer Science)	<i>g.panicker05@gmail.com</i>	Post-Doctoral Fellow, IIT Kanpur
60	Anirudha Poria	2018	Jitendriya Swain	<i>anirudhamath@gmail.com</i>	Post-Doctoral Fellow, IISc Bangalore
61	Ankur Kanaujiya	2018	Siddhartha Pratim Chakrabarty	<i>ankurkanaujiya09@gmail.com</i>	Assistant Professor, NIT Rourkela
62	Ramesh Kumar Jallu	2018	Gautam Kumar Das	<i>jalluramesh@gmail.com</i>	Post-Doctoral Fellow, Institute of Computer Science, The Czech Academy of Sciences, Czech Republic
63	Deb Kumar Giri	2018	Rajesh Kumar Srivastava	<i>debkumar293@gmail.com</i>	Post-Doctoral Fellow, IISc Bangalore
64	Ramesh Prasad Panda	2018	K. V. Krishna	<i>Rameshprpanda@gmail.com</i>	Post-Doctoral Fellow, NISER Bhubaneswar
65	Maneesh Kumar Singh	2018	S. Natesan	<i>maneesh.sr51@gmail.com</i>	Post-Doctoral Fellow, IISc Bangalore
66	Sougata Biswas	2018	Jiten C Kalita	<i>sougata9891@gmail.com</i>	Assistant Professor, Gokhale Memorial Girls' College, University of Calcutta
67	Koyel Chakravarty	2018	Durga Charan Dalal	<i>Koyelchakravarty@gmail.com</i>	Assistant Professor, The ICFAI University Tripura
68	Naba Kanta Sarma	2018	Anupam Saikia	<i>kanta.naba@gmail.com</i>	Assistant Professor, Assam University, Silchar

Sl.No.	Name	Year	PhD Supervisor(s)	E-mail	Current/Recent Position
69	Pratibha Shakya	2019	Rajen Kumar Sinha	shakya.pratibha10@gmail.com	Post Doctoral Fellow, IIT Delhi
70	Jayanta Borah	2019	Swaroop Nandan Bora	jba@tezu.ernet.in	Assistant Professor, Tezpur University
71	N. Balasubramani	2019	M. Guru Prem Prasad and S. Natesan	balumaths175@gmail.com	Assistant Professor, VIT, Vellore Campus
72	Tamal Pramanick	2019	Rajen Kumar Sinha	tamalpramanick.iitg@gmail.com	Assistant Professor, NIT Calicut
73	Biplab Paul	2019	Arabin Kumar Dey	biplab.paul497@gmail.com	Post Doctoral Fellow, NISER Bhubaneswar
74	Chiranjit Ray	2019	Rupam Barman	chiranjitray.m@gmail.com	Post Doctoral Fellow, Harish-Chandra Research Institute, Prayagraj
75	Madhusudan Bera	2019	M. Guru Prem Prasad	msnbera@gmail.com	Assistant Professor, KIIT University, Bhubaneswar
76	Swarup Barik	2019	Durga Charan Dalal	swarup.barik270@gmail.com	Assistant Professor, NIT Meghalaya
77	Arindam Dey	2019	Vinay Wagh	arindam.dey.iitg@gmail.com	Post Doctoral Fellow, Harish-Chandra Research Institute, Prayagraj
78	Ranjan Kumar Das	2019	Rafikul Alam	d.ranjan@iitg.ac.in	Post Doctoral Fellow, IIT Bombay
79	Ananda Chandra Nayak	2019	Kalpesh Kapoor	nayakanand89@gmail.com	Lecturer, Kendrapara Autonomous College, Odisha
80	Biswajit Das	2020	Shreemayee Bora	dasjoy90@gmail.com	Guest Faculty, Tezpur University
81	Sonjoy Pan	2020	Siddhartha Pratim Chakrabarty	pan.sonjoy@gmail.com	Assistant Professor, The ICFAI University Tripura
82	Devanand	2020	Jiten C Kalita	devanandiit@gmail.com	PhD, IIT Guwahati
83	Debasish Pattanayak	2020	Partha Sarathi Mandal and H. Ramesh	drdebmath@gmail.com	Visiting Scientist, ISI Kolkata

Schedule-ASMC 2020

Time	DAY-1: 19 th September, 2020, Saturday	
9:00 A.M.	<i>Inauguration</i> Prof. T. G. Sitharam, Director, IIT Guwahati and Prof. Rakhi Chaturvedi, Dean of Alumni & External Relations	
9:45 A.M.- 12:15 P.M.	<i>Session-1: Chair: Prof. Swaroop Nandan Bora & Co-Chair: Dr. Bhupen Deka</i>	
	Speaker	Title of the Talk
09:45 AM	Dr. Jiten Chandra Kalita, IIT Guwahati	Flow Past Sharp Edges in Uniform and Accelerated Flow: A Biharmonic Approach
10:15 A.M.	Dr. Subash Chandra Martha, IIT Ropar	Application of Integral Equation Method to Some Linear and Nonlinear Problems of Fluid Dynamics
10:45 A.M.	Dr. Shuvam Sen, Tezpur University	Transformation Free (5,5) HOC Discretization of Transient Navier-Stokes/ Boussinesq Equations on Nonuniform Grids
11:15 A.M.	Dr. Santu Das, IASST	The Genesis of Negative Energy Waves in Hydrodynamics
11:45 A.M.	Dr. Ankur Kanaujiya, NIT Rourkela	A Simple Trading Strategy using Moving Average
12:15 PM – 02:00 PM	<i>LUNCH BREAK</i>	
02:00 PM - 04:30 PM	<i>Session-2: Chair: Dr. Rupam Barman & Co-Chair: Dr. Vinay V. Wagh</i>	
2:00 P.M.	Dr. Shubh Narayan Singh, Central University of South Bihar, Gaya	On Certain Semigroups of Transformations that Preserve a Partition
2:30 P.M.	Dr. Dishari Chaudhuri, IISER Mohali	The Twisted Derivation Problem for Algebras
3:00 P.M.	Dr. Debopam Chakraborty, BITS Pilani	Rank Computation of Elliptic Curves: A Pathway towards Congruent Number Problem over Number Fields
3:30 P.M.	Dr. Ramesh Prasad Panda, NISER Bhubaneswar	On Finite Groups of Prime Exponent and Associated Power Graphs
4:00 P.M.	Dr. Chiranjit Ray, HRI, Prayagraj	Certain Eta-Quotients and l -regular Overpartitions
04:45 PM – 05:45 PM	<i>Panel Discussions:</i> <i>Topic: Recent Trends in Research in Mathematics & Computing (Panelists: Prof. Anupam Saikia, Prof. Shreemayee Bora (Moderator), Prof. Partha Sarathi Mandal, Dr. Palash Ghosh, PhD Alumni & Current PhD Students)</i> <i>Topic: Experiences on Online Teaching & Learning (Panelists: Prof. B. K. Sarma, Prof. Shreemayee Bora (Moderator), Prof. K. V. Krishna, Dr. Subhamay Saha, PhD Alumni & Current PhD Students)</i>	

Time	DAY-2: 20 th September, 2020, Sunday	
9:30 A.M.-12:30 P.M.	<i>Session-3: Chair: Prof. M. Guru Prem Prasad & Co-Chair: Dr. Jitendriya Swain</i>	
	Speaker	Title of the Talk
09:30 AM	Dr. Shreemayee Bora, IIT Guwahati	Nearest Rank Deficient Matrix Polynomials
10:00 A..M.	Dr. Tarakanta Nayak, IIT Bhubaneswar	Quadratic and Cubic Newton Maps of Rational Functions
10:30 A.M.	Dr. Debajit Kalita, Tezpur University	On the Inverse Graph of a Non-Bipartite Unicyclic Graph with Unique Perfect Matching
11:00 A.M.	Dr. Punit Sharma, IIT Delhi	Computing Nearest Stable Matrices
11:30 P.M.	Dr. Manideepa Saha, NIT Meghalaya	On Semipositive Cones and their Extremals
12:00 P.M.	Dr. Deb Kumar Giri, IISc Bangalore	Fourier Uniqueness Sets for the Hyperbola
12:30 PM – 02:00 PM	<i>LUNCH BREAK</i>	
02:00 PM - 04:30 PM	<i>Session-4: Chair: Prof. Kalpesh Kapoor & Co-Chair: Dr. Gautam Kumar Das</i>	
2:00 P.M.	Dr. Biswajit Deb, SMIT, Sikkim	On Characterization of 2-Path Signed Graphs
2:30 P.M.	Dr. Kaushik Mondal, IIT Ropar	Efficient Dispersion on an Anonymous Ring in the Presence of Weak Byzantine Robots
3:00 P.M.	Dr. Barun Gorain, IIT Bhilai	Efficient Pebble Placement for Treasure Hunt in Anonymous Graphs
3:30 P.M.	Dr. Shibsankar Das, Institute of Science, BHU	On M-Polynomial of the Third Type of Hex-Derived Network
4:00 P.M.	Dr. Debasish Pattanayak, ISI Kolkata	Forming Conic Patterns with Faulty Robots
04:45 PM - 05:30 PM	<i>Alumni Interactions: Alumni Sharing their Experiences and Interacting with current students (Participants: Dr. Biswajit Das, Dr. Dishari Chaudhuri, Dr. Rupam Barman, Dr. Bhupen Deka, Mr. Rakesh Jana, Mr. Avijit Das)</i>	