

60<sup>th</sup> Birthday Celebration of Prof. Palash Baran Pal

# PALASH60

29<sup>TH</sup> SEPTEMBER 2015



- 2:30 - 2:40 Director's address
- 2:40 - 3.20 Prof. Utpal Sarkar (PRL, Ahmedabad)  
Title: Baryon and Lepton Number Violation in Nature
- 3:20 - 4:00 Prof. Kaushik Bhattacharya (IIT, Kanpur)  
Title: An Open Ended Story
- 4:00 - 4:30 Coffee
- 4:30 - 5:30 Reminiscence Talks
- 5:30 Prof. Palash Baran Pal's Talk

*Refreshments would be served in Room 3307 at the end of Palash's talk*



LECTURE HALL I, AUDITORIUM COMPLEX

**Organized by Theory Division, SINP**

Participation by invitation

PALASH60



Theory Division  
Saha Institute of Nuclear Physics, Kolkata

29th September, 2015

# Worldline

B.Sc. (1975) Presidency College

M.Sc. (1977) Calcutta University

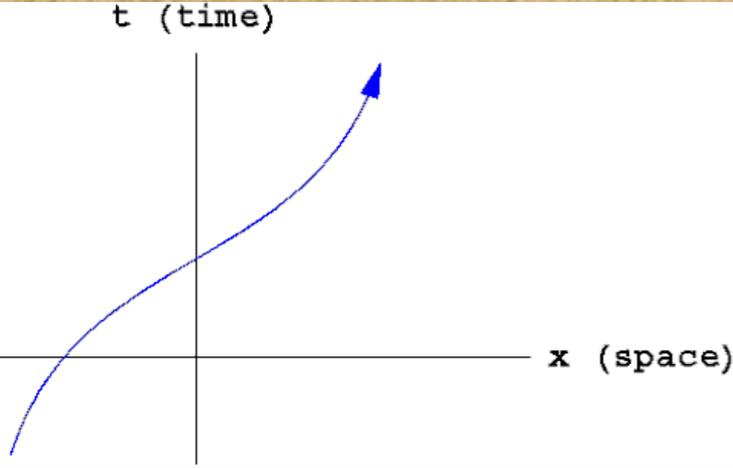
Ph.D. (1983) Carnegie-Mellon University

Postdoc in University of Maryland (College Park), University of Massachusetts (Amherst), University of Oregon (Eugene), University of Texas (Austin)

Visitor in University of Puerto Rico (Puerto Rico), Ecole Polytechnique (France), ICTP (Italy), Instituto Superior Técnico (Portugal)

Associate Professor (1994-97) Indian Institute of Astrophysics, Bangalore

1997 onwards at Saha Institute of Nuclear Physics, Kolkata





### Research Interests:

- Weak interaction, neutrino physics.
- Beyond Standard Model, Grand Unification.
  - Particle in a medium.
  - Particle in a magnetic field.
- Astrophysics & Cosmology related to Particle Physics
  - Linearized theory of Gravity

### SLAC InSpire database:

141 publications, with 100 collaborators!

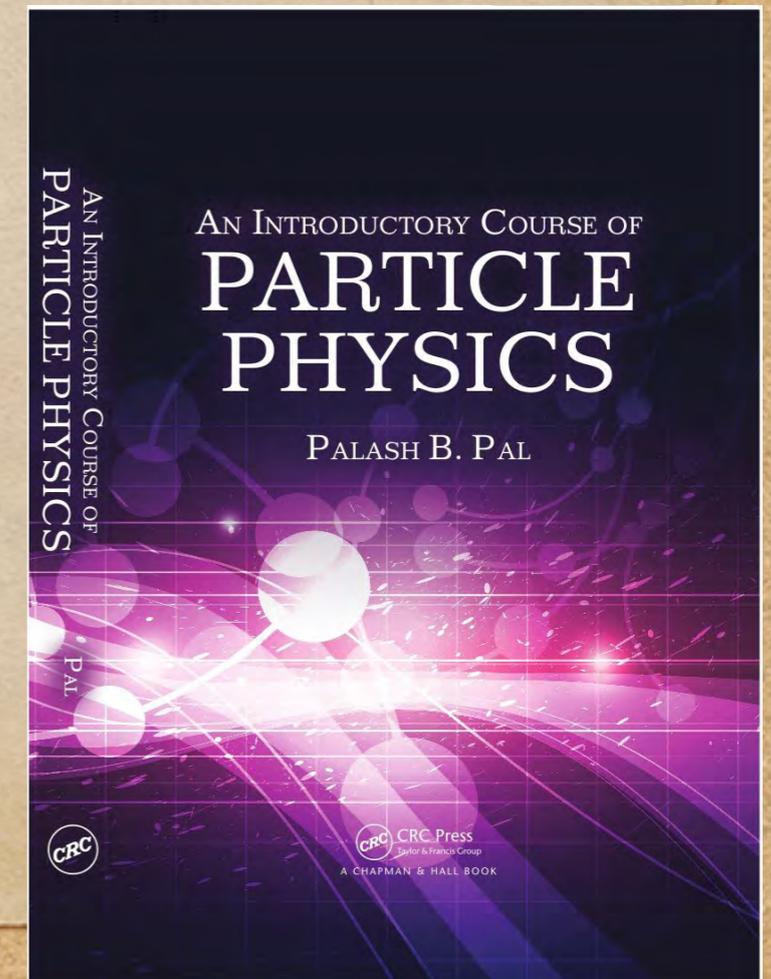
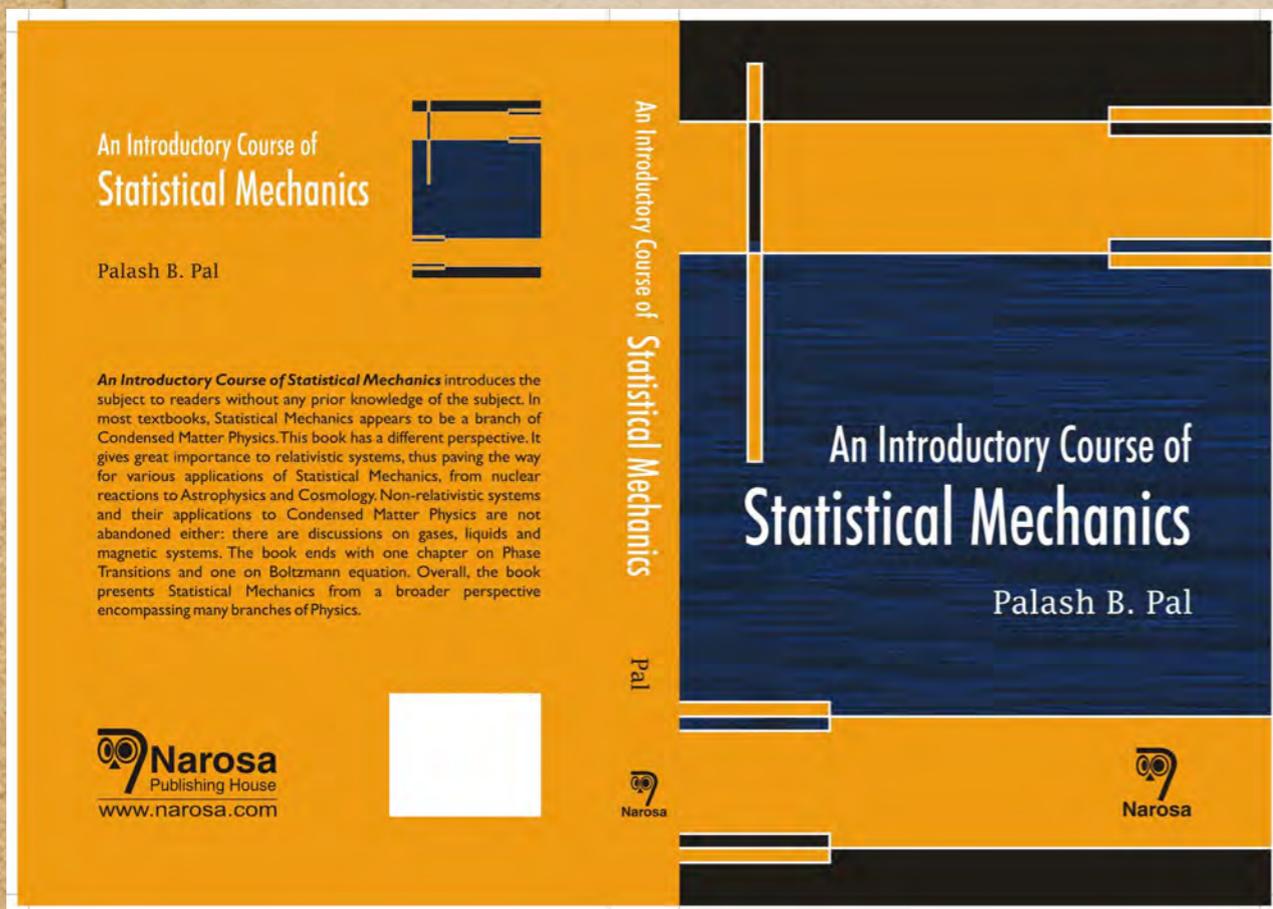
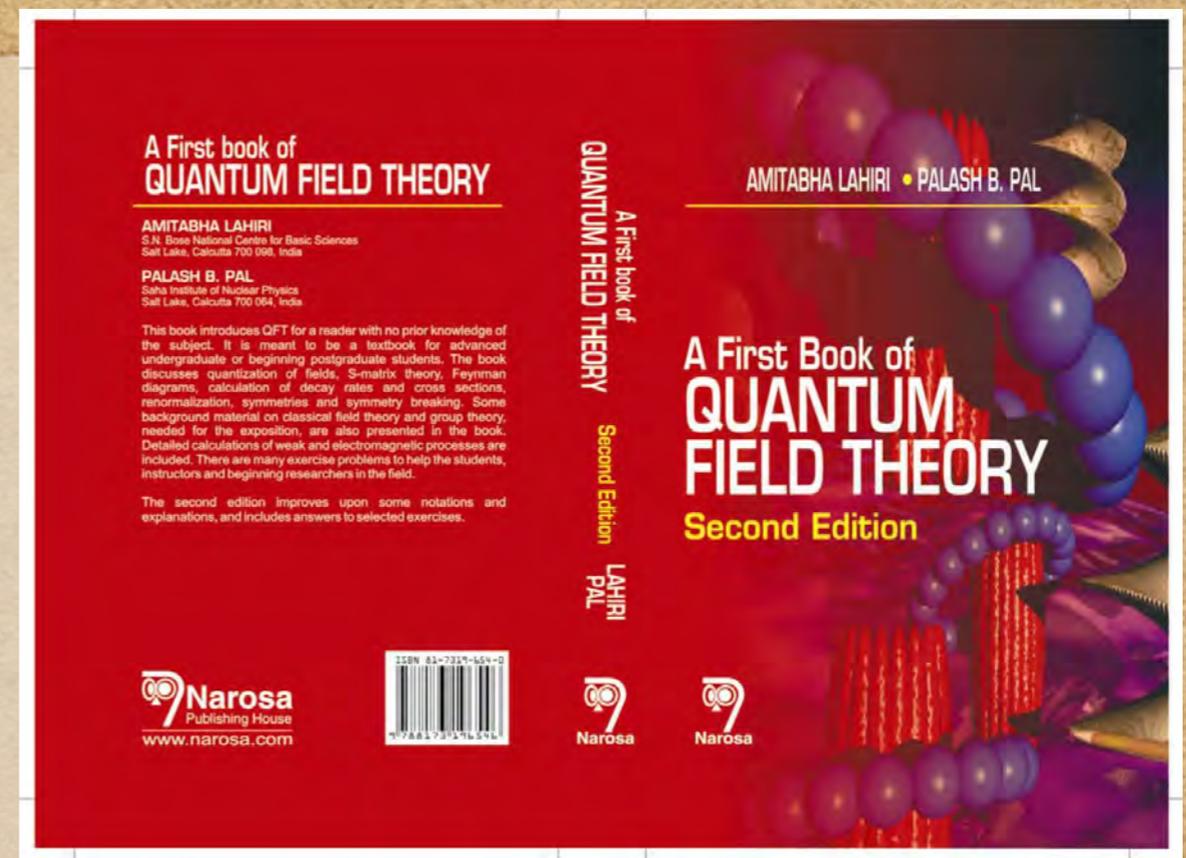
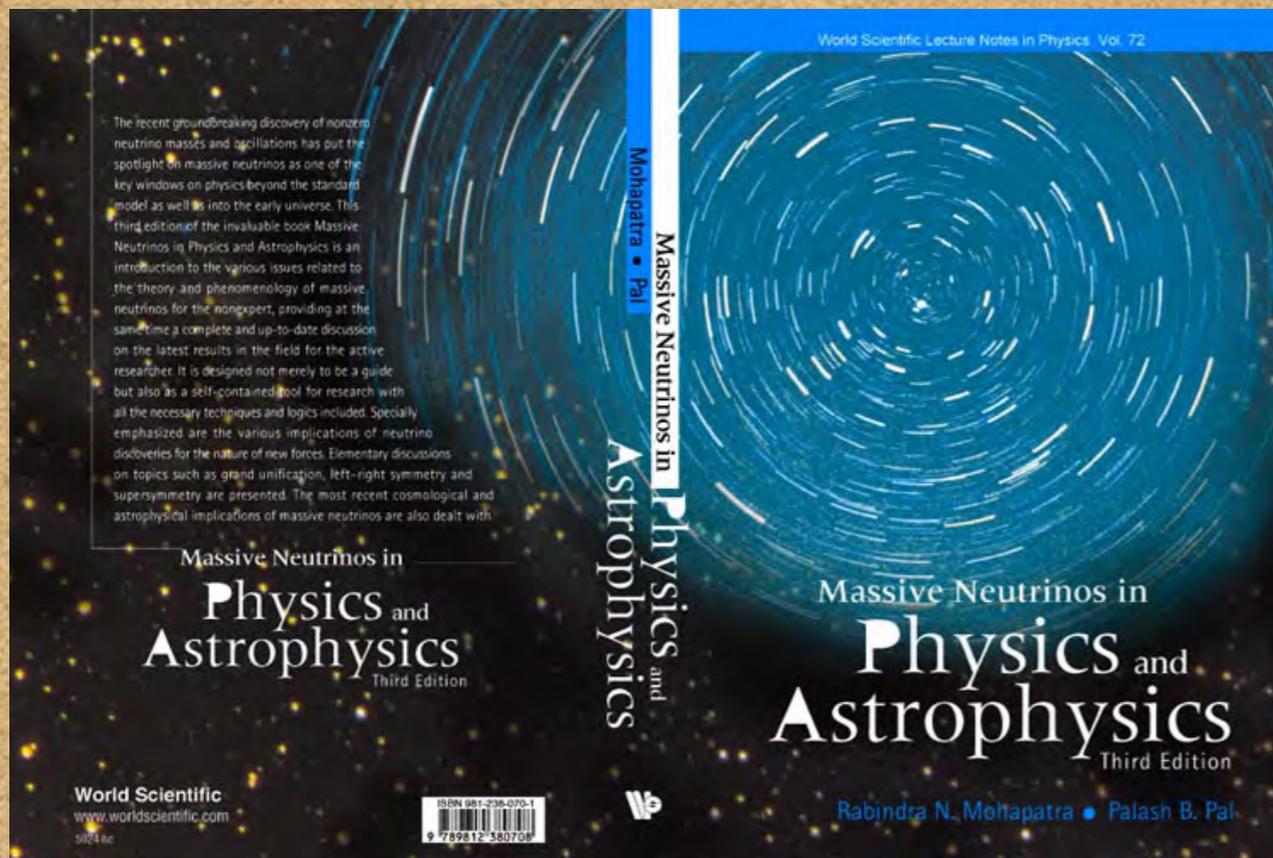
2300 total citations!

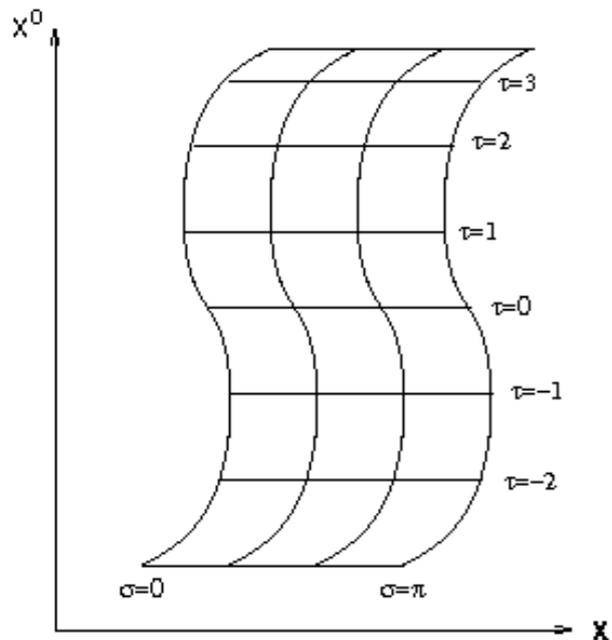
h-index 26!

One 250+, One 100+, Ten 50+ citations

### Academic Books:

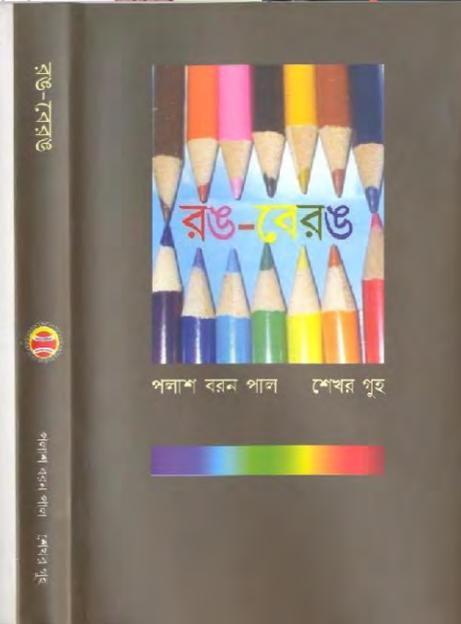
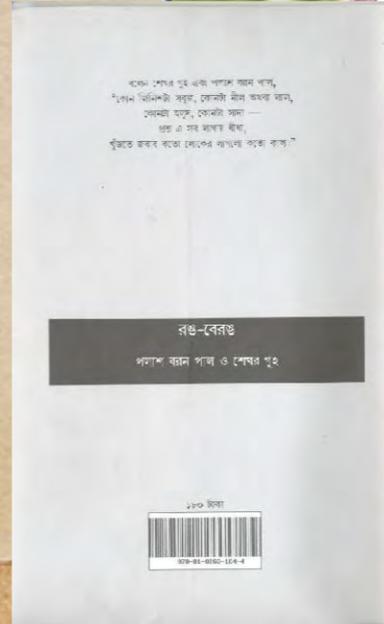
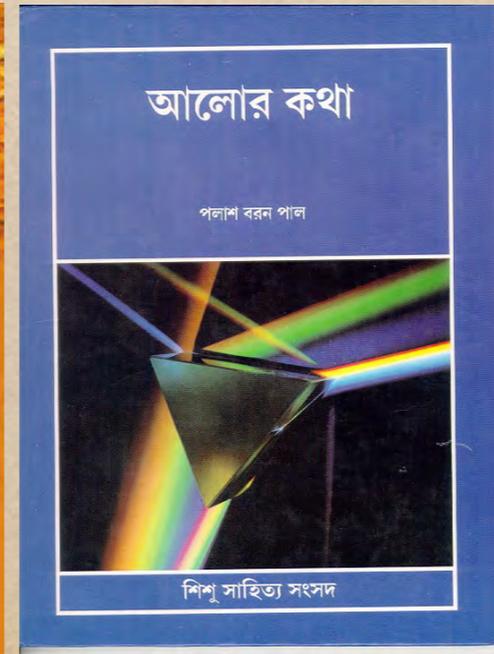
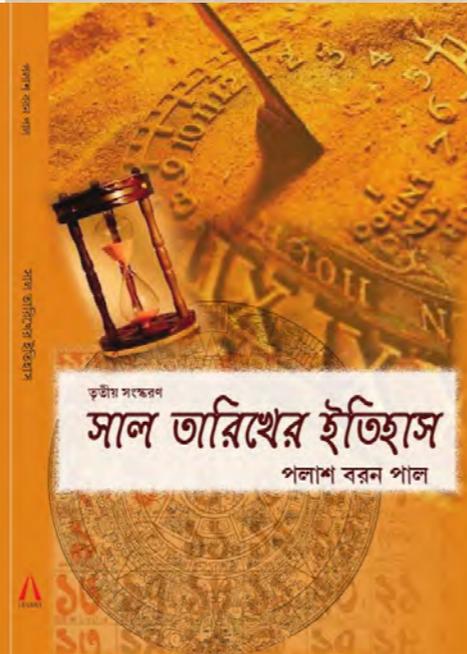
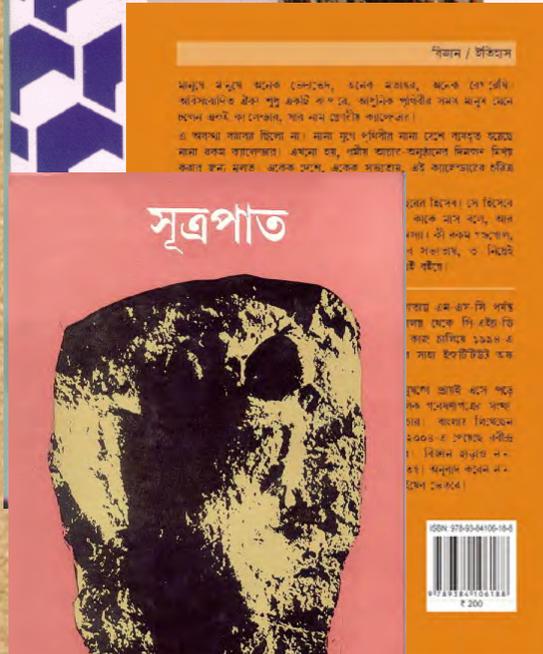
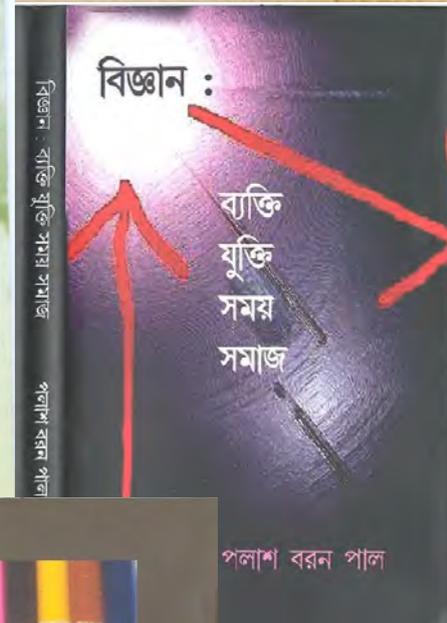
4 books, ranging Undergraduate-Post graduate-Research





# Worksheet

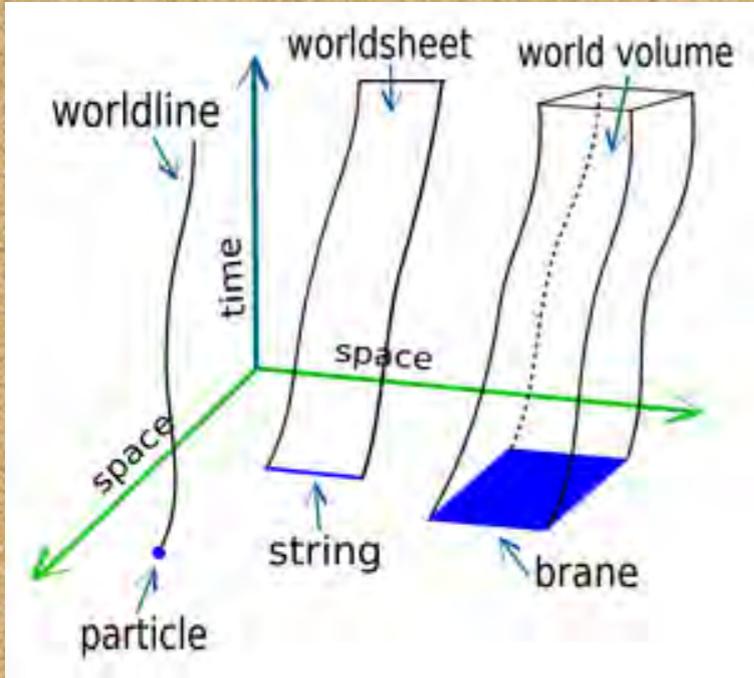
Popular-level books:  
 7 books, 2 of which later translated in English.  
 Bengali translation of Asimov's "Beginnings"  
 23 popular level articles on Science



আইজ্যাক অ্যাসিমভ

পলাশ বরন পাল

# Worldvolume



Literature:

Translation into Bengali: poems of Neruda, Prevert; haikus of Basho

Translation from Bengali: short stories of Parashuram, Shirshendu Mukhopadhyay

3 books on linguistics

book on folktales collected from around the world

Language of the other kind:

bangtex: for typesetting documents in Bangla using TeX/Latex

pptalk: Latex-based talk presentation package



# Messages from a distance

Sumit Das (University of Kentucky)

Debashis Gangopadhyay (RKMVU)

Tristan Hubsch (Howard University)

Rabi Mohapatra (University of Maryland)

Jogesh Pati (University of Maryland)

Eugene Golowich (University of Massachusetts, Amherst)

N. G. Deshpande (University of Oregon)

Fred & Gloria Olness (Southern Methodist University,  
Dallas)

Duane Dicus (University of Texas, Austin)

Wai-Yee Keung (University of Illinois, Chicago)

Tri Nang Pham (Ecole Polytechnique)

Amitava Raychaudhuri (University of Calcutta)

Biswarup Mukhopadhyaya (HRI, Allahabad)

Kamales Kar (SINP, Kolkata)

David Emmanuel-Costa (CFTP, Lisbon)

Ujjal Kumar Dey (PRL, Ahmedabad)

# Sumit Das, University of Kentucky, USA

"Soon after I entered Presidency College in 1972, I realized how fortunate I was. There were outstanding teachers and the tremendous intellectual vitality that was College Street. And there were my classmates : a truly outstanding group whose drive and enthusiasm knew no bounds. They became my close friends, and I owe most of my education to them. Among them, Palash was unique : someone who was equally comfortable with physics, music, literature, cricket, football - and who knows what else. He has maintained his renaissance character all these years, becoming a leading particle physicist and a distinguished writer at the same time - wandering from subtle properties of neutrinos to the origin of calendars and the poetry of Pablo Neruda with a rare ease. And those superb books explaining a wide range of science to everyone.

I wish i could say : "I cannot believe that he is 60", simply because I will be myself 60 years old in a few months. It doesnt really feel like that : rest assured that we are both still quite capable of the many pranks we played while being lab partners in our practical classes in Science College. It is best I dont tell you those stories now."

# Tristan Hubsch, Howard University, USA

"... And your

seemingly indefatigable patience---such as when you drove me to the Greyhound bus station so as to travel to Canada on a moment's notice, only to see me discover that I had no passport with me, then drive me back home to pick up my passport and then back to the Greyhound bus station to see me off---all in time, and with but a faintest smile of amusement at my utter, bumbling state of confusion!

...

Such as when we were both surprised that the Hamiltonian in string theory---the energy of this most ambitiously magnanimous endeavor of human thought since, well, sliced bread and Ramen noodles---was most precisely and undeniably zero. For, how much more surprising can any one imagine a discovery to be than to learn the astounding fact that the Universe needs no effort in being what it already is?!... However, our joint discovery---the brilliant gem which still languishes buried under the dust and cobwebs of the pre-arXiv-al pre-history of high energy physics, but where we bested our peers by a long country mile, fair and square: our one and only "Economical unification of three families in  $SO(18)$ "! We have made this behemoth behave using about an order of magnitude fewer Higgs fields than our best competitors: a measly 641 Higgs particles! (CERN: stop languishing on your laurels, you've got 640 more to go!) The only reason I can think of that this marvel of parsimony did not gain general popularity and universal acclaim and accolade is that the legal drinking age in the USA is 21, so our  $SO(18)$  model never got into the best clubs. Oh, well.

Tristan Hubsch, Howard University, USA

But, let me finish with a friendly complaint: I am having a hard time just staying informed of your diverse and multi-disciplinary publication list!! Clearly, you've managed to live the first half of your first century at an astounding 20% rate of overachievement! Relax, Man! It's time to kick back, enjoy and let me catch up with you. And share a few more jokes. There's never enough jokes!

Best wishes for your 60th birthday, and don't worry: you don't look a day over 59!

## Rabi Mohapatra, University of Maryland, USA

"...The most significant result of our collaboration, which continued for several years, was a book on neutrino masses that went into three editions and still useful to people even though many other books have been written after that. After Palash went back to India, I have been following his many contributions to the field of particle physics such as writing two wonderful books, one on Quantum Field Theory and another of Particle physics but I have also learnt about his many contributions conveying the excitement of our field to common people, an endeavor which, I wish, many more people undertook although, I am sure few would be able to beat Palash in this.

Palash, you have had a wonderful career of which you should be very proud and hope you can inspire many more people from now on, as I am sure you will. Happy birthday and wish you even more productivity in your next 60 years."

## Jogesh Pati, University of Maryland, USA

"... On this happy occasion, I would like to congratulate you on reaching the golden age of sixty with a track record such as yours, and to wish you continuing joy in your pursuit of the academic line, with health and happiness, for the years to come."

Eugene Golowich, University of Massachusetts, Amherst, USA

"... One time, I saw him writing page after page in the flowing Bengali script. He told me he was working on a translation from Spanish to Bengali of poetry written by the Chilean Pablo Neruda and that his Spanish was self-taught. Wow! I was (and still am) very impressed with this. Another time, I heard some loud laughter from his office and found him doubled over with glee. He was reading a book on Jewish humor. Wide interests indeed....

Each of us, in our passage through life, meets many people and this forms the very fabric of our experience. I think it is clear to the celebrants of 'Pal turns 60' that Palash is a very special person indeed and that it is our good fortune to have interacted with him."

Tri Nang Pham , Ecole Polytechnique, France

"... We wrote a paper " A Field Theoretic Derivation of Wolfenstein's Matter Oscillation Formula" in two days thanks to the effort of Palash (the paper was written almost by Palash) and I have nice souvenir about his stay at Polytechnique. ...

On this occasion, Happy Anniverary to Palash and Best Wishes to him for Good health Happiness and continuing successes in physics."

# Amitava Raychaudhuri, University of Calcutta

"... The other incident was when we had asked Palash to give an introduction to neutrino oscillations to a group of about 2000 school and college students in an outreach program at Science City. Palash worried me because he was nowhere 10 minutes before the meeting started. Of course, he was there on the dot. He wanted to use a blackboard but we had not planned for one. There was computer projection available but Palash did not have a presentation prepared. Completely unfazed, Palash went on to give a mesmerizing introduction to neutrino oscillations, interspersed with humour, without using any help other than his two hands. The students were thrilled. It turned out to be the best talk.

I envy you at Saha Institute who have Palash's company every day. I wish him many years of fruitful professional life and look forward to learning physics from him and enjoy his stimulating inputs, not just in science."

Ujjal Kumar Dey, PRL, Ahmedabad

“Like most of the aspiring student of high energy physics, my first introduction to his name was from his book on quantum field theory which is popularly known in the student community by the name Lahiri-Pal. With time I came to know about his other academic and popular-level books as well (by the way, this proclivity for popularization of science is not ubiquitous among the stalwarts in Indian science). As I continued with my PhD (in high energy physics), I came to know more about him from my friends at SINP and also from various anecdotes from my mentors who happened to be his colleagues. It was from these things that I came to know that he is a multilingual and computer-savvy person who uses, of all things, a pocket-watch! ...”

Let's hear more!