

Just a few reflections + photos

1971 Stony Brook, graduate study

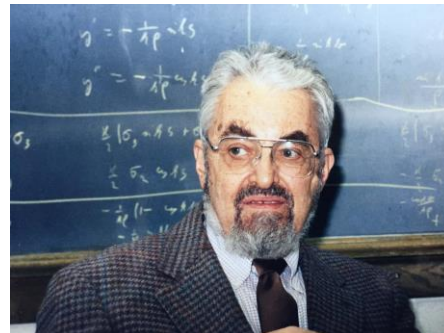
1972

Professor Chenning Yang
Studied high energy physics
thesis on HEP



1972

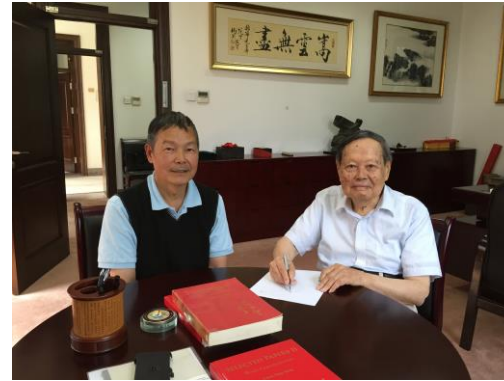
Professor Ernest Courant
Introduction accelerator physics
half-time ISABELLE at BNL



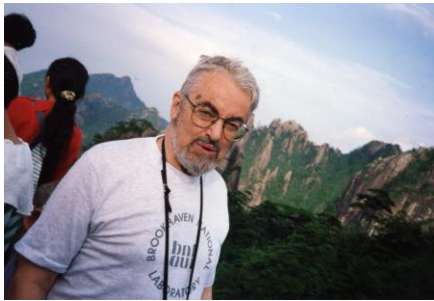
- Lifelong learning with professors Yang and Courant



1981 Tokyo University



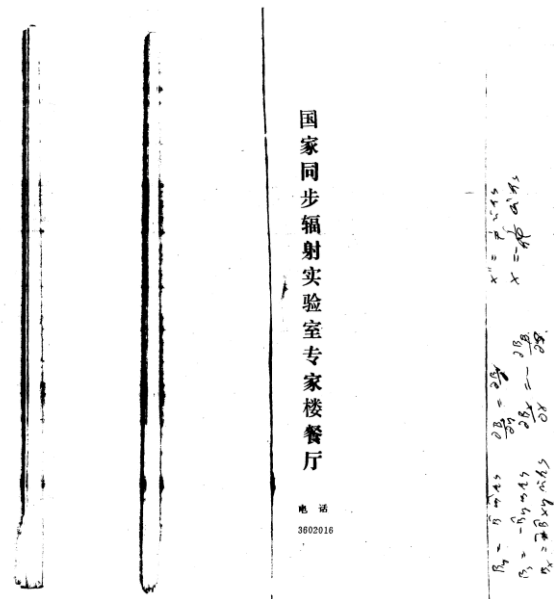
2016 Tsinghua University
Special lecture on quaternions



Yellow Mountain
1994



Marseilles
1984



1994 Courant's special lecture
on helical spin snake

Speaking of being grateful, two more things happened in 1973-74 pivotal to my life.

- First, Patricia said YES, not knowing what she got herself into.



1972 Montreal



1973. 5. 30 New York



- Then, Professor Yang talked to me --- twice, convinced me to make a transition from high energy physics to accelerator physics.

➔ I became an accelerator physicist.



Reflection becoming an accelerator physicist wasn't easy 1974:

- Accelerator physics was not a field!
 - ✧ “Accelerator physics” was not a phrase
 - ✧ No professional organizations in APS, EPS, etc
 - ✧ No profession journals
 - ✧ No prizes/honors
 - ✧ No schools

Should a young PhD enter a field like that? I hesitated.



- After two in-depth discussions with Yang, I made the right decision!
- I have been very lucky that Yang and Courant were there for the guidance and encouragement at a time when I needed them most.



- As mentioned, accelerator physics was not a field in 1974. I was hired to SLAC as “experimental high energy physicist”.
- But I was lucky, I came to SLAC where meeting me were visionary leaders.



Pief



Burt 1983

- Reflection I am grateful for 10 years of uninterfered accelerator physics research at SLAC 1974-1984. All my later research works trace back to works done in these years.

- In 1984, Maury Tigner asked me to join the Superconducting Super Collider Central Design Group.
 - ✧ Started unforgettable time of hard and exciting work on a big project.
 - ✧ And many later years.



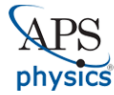
then



now

- Cancellation of the SSC sent me back to SLAC in 1993. It conclusively ended my participation in big projects!

In the mean time, the accelerator community evolved with dedicated efforts by many. Thanks to these efforts, we now have an accelerator community. “Accelerator physics” is now a phrase!



Division of Physics of Beams



ABOUT US MEMBERSHIP DISTINCTIONS EVENTS SUPPORT EDUCATION

Groups: Accelerator Group



ABOUT MEETINGS PANELS STATEMENTS LINEAR COLLIDER ACTIVITIES



International Committee for Future Accelerators

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Reviews of Accelerator Science and Technology

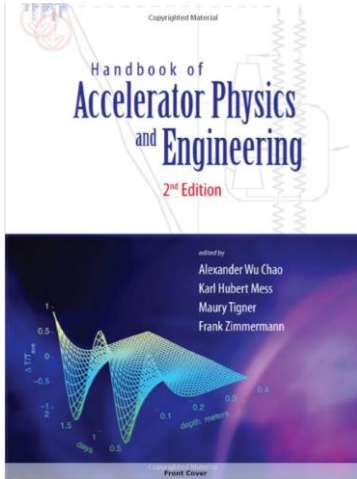
Reviews of Accelerator Science and Technology

"The first two volumes of Reviews of Accelerator Science and Technology are timely, instructive and comprehensive. The journal is well laid out and, thanks to the many informative photos and diagrams, it is also easy to read. It is written in an impartial and balanced way and covers the achievements made at several laboratories around the world ... It appeals to the experts as well as to all scientists working and applying the use of accelerators. Active scientists and historians of science will appreciate this chronicle of the development of accelerators and their key role in the progress of various domains during the past century. It should be on the shelf of every scientist working with accelerators and of those with an interest in the history and future directions of accelerators and their applications." - CERN Courier

Vol. 9 (2016): This volume introduces a number of advanced accelerator concepts (AAC) - their principles, technologies and potential applications. For the time being, none of them stands out as a definitive direction in which to go. But these novel ideas are in hot pursuit and look promising. Furthermore, some AAC requires a high power laser system. This has the implication of bringing two different communities - accelerator and laser - to join forces and work together. It will have profound impact on the future of our field. Also included are two special articles, one on "Particle Accelerators in China" which gives a comprehensive overview of the rapidly growing accelerator community in China. The other features the person-of-the-issue who was well-known nuclear physicist, Jerome Lewis Duggan, a pioneer and founder of a huge community of industrial and medical accelerators in the US.

Vol. 8 (2015): As accelerator science and technology progressed over the past several decades, the accelerators themselves have undergone major improvements in multiple performance factors: beam energy, beam power, and beam brightness. As a consequence, accelerators have found applications in a wide range of fields in our life and in our society. The current volume is dedicated to applications in energy and security, two of the most important and urgent topics in today's world. This volume makes an effort to provide a review as complete and up to date as possible of this broad and challenging subject. It also has a review article on accelerator science and technology in Canada with a focus on the TRIUMF laboratory, and an article on the life of Bruno Touschek, a renowned accelerator physicist.

Vol. 7 (2014): Over the past decades, colliders defined the energy frontier in particle physics. Different types of colliders - proton-Carbon, proton-Carbon, electron-Carbon, electron-Carbon, electron-ion and ion-ion colliders - have played complementary roles in fully mapping out the constituents and forces in the Standard Model (SM). We are now at a point where all predicted SM constituents of matter and forces have been found, and all the latest ones were found at colliders. Colliders also play a critical role in advancing beam physics, accelerator research and technology development. It is timely that RAST Volume 7 is dedicated to Colliders.



U.S. Particle Accelerator School

Education in Beam Physics and Accelerator Technology

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OCPA

International Organization of Chinese Physicists and Astronomers

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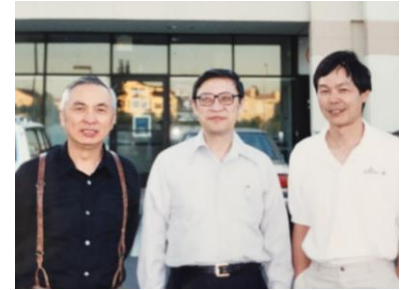
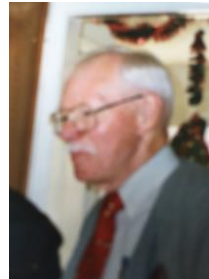
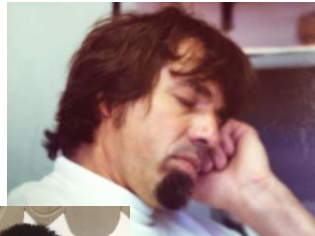
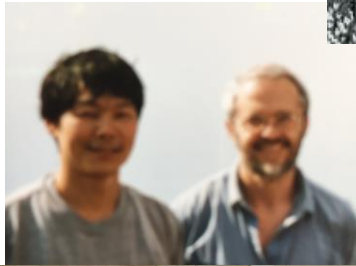
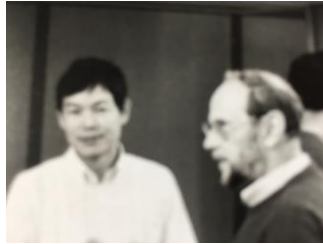
- Melvyn Month, leader of these efforts in the 70s and 80s.
 - ✧ USPAS school
 - ✧ Division of Physics of Beams in the APS
 - ✧ the Wilson Prize

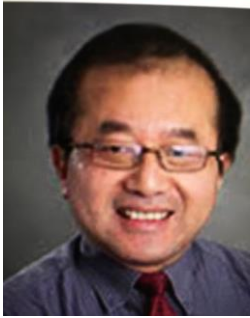


Melvyn Month 1983

- Many other efforts
 - ✧ Accelerator Group in EPS
 - ✧ International Committee of Future Accelerators
 - ✧ Physical Review of Accelerators and Beams
 - ✧ Handbook of Accelerator Physics and Engineering
 - ✧ Reviews of Accelerator Science and Technology
- Much more needs to be done. Burden falls on younger generation.
=> **May the community growth continue!**

- Reflections don't stop at my beloved professors and bosses.
- Also many close friends and colleagues!





- Last but not least ... and family!
Thanks for coming!

