D. School 23

Chapter 23 - 4 major mathematics journals

If you ask a reading mathematics student how he feels when he takes a class in the mathematics department, he will probably look at you with melancholy eyes, and then say that this major sounds very high, but it really reads like there are no subtitles. The American drama is as refreshing.

So what is it like in the Department of Readings in Princeton? This is like attending the Jinlong Chess Game Conference without Cliffs. Not only do you first have to be a famous hero on the rivers and lakes, but you also need to show the IQ that crushes all competitors on the rivers and lakes. The true biography, thus entering this world-ranked faculty.

But even after this round of selection, not every student has the opportunity to publish a paper in the “Annual Mathematics”, because after all, Xia Shao is a Xia Shao, and there are countless big schools on the rivers and lakes. The masters, martial arts legends who have lived in martial arts for many years, and the younger generations of the previous generation and the previous generation, although they are talented and work hard enough, they always have less decades of internal training.

Of course, the magazine with the highest impact factor in the mathematics industry is not the “Mathematics Yearbook” but the Swedish “Mathematics Journal”, but this does not mean that the “Mathematics Yearbook” is not as good as the “Journal of Mathematics”, which has different fields of emphasis. There are historical reasons as well as changes in academic hot spots.

For the current Lu Qiujian, it is easier to pass the contribution to the “Annual Mathematics” because of the relationship of Professor Wiles. With this article, he will be able to open a small situation in the mathematics world and lay a foundation for subsequent plans. basis. After all, in academia, no fame is impossible!

As for why the first journal in the mathematics world came from Sweden, not the United States, Britain, or even France, Russia, and Japan, this must start from the Swedish mathematical tradition.

Everyone is curious why the Nobel Prize in Natural Science only has three items: physics, chemistry, medicine and physiology, but no mathematics prize. There is a rumor that Nobel himself has been NTR by a mathematician, and this mathematician is the Swedish mathematics. The originator of the mountain, Mita-Lefler.

Mita-Lefler was born and died in the capital of Stockholm. He has been working at Stockholm University for a long time. He is a student of the famous German mathematician and professor of

the University of Berlin Weierstrass. Mita has many classic works in mathematical analysis and complex variable functions, with 119 kinds of writings, including the famous Mita-Lefler theorem and Mita-Leffler matrix. Mita is also an excellent educator and outstanding organizer. Through his painstaking management, Sweden at that time had the best mathematics research materials and libraries in the world. In 1882, he also published the first-class mathematics journal “Journal of Mathematics”, training and hiring famous scholars such as Fredholm, Flagmen, von Cork, and made Sweden one of the world’s mathematics research centers at that time. .

It can be said that he used his own strength to make Sweden into a mathematics research center comparable to Cambridge, Princeton and Göttingen.

Then his disciples Fred Holm and von Cork inherited and developed this advantage. Fred Holm mainly engaged in equation theory research. He gave the basic solution of the general constant coefficient elliptic partial differential equations, and received attention in the study of integral equations to solve the “Fredholm equation”, so he won the “Paris Academy Award” and became the two countries of Sweden and France. Academician of the Chinese Academy of Sciences.

A theorem proved by Cork in 1901 revealed a stronger form of the Riemann conjecture equivalent to the prime number theorem. In his 1904 paper “On a continuous curve without tangents that can be constructed by basic geometric methods”, he described the construction method of the snowflake curve, which is one of the earliest fractal curves, which was later called “Science Gram snowflake “.

After Mita-Leffler went, Kaleiman took over his mantle and began to take charge of the Mita Institute and the Journal of Mathematics. His main contributions were in function theory, integral equation theory, and spectrum theory. Named a number of theorems, laws, inequalities, integral kernels, and orthogonal polynomials. Until now, the Kaleiman inequality is still a hot field of inequality research.

Kramer, who was with him in the same period, first studied analytic number theory and then turned to probability theory. In his book “Statistical Mathematical Methods”, he explained the method of statistical inference on the basis of strict probability theory. The book was widely used as a textbook in various countries, and in 1960 China also published a Chinese translation.

Later, Carlson was in charge of the Mita Institute and the Journal of Mathematics. He was the chairman of the International Mathematical Union and a member of the Swedish Academy of Sciences, the American Academy of Arts and Sciences, the Russian Academy of Sciences, the Royal Society, France, Denmark, Norway, Finland , Academician of the Academy of Sciences in Hungary.

And because of the important contributions in Fourier analysis, complex analysis, quasi-conformal mapping and dynamic system, he won the Steele Award of the American Mathematical Society. Wolf Prize in Mathematics; from his experience in office, it can be seen that this is a very active person. The status of the “Journal of Mathematics” has a close relationship with him.

Then there was Helmandell, and his research area was the field of partial differentials to which Lu Qiujian now belongs, and he systematically established the local and global theory of Fourier integral operator. He has won the Fields Medal and Wolf Prize, the highest awards in the mathematics world.

If it is a metaphor, the “Journal of Mathematics” is like Wang Chongyang’s Quanzhen religion. The founding ancestor Mita-Leffler laid the foundation for the development of the faction, and the subsequent Carlson and others developed their martial arts like Quanzhen Qizi.

The “Annual Mathematics” is like Shaolin. Although it is a little weak at the moment, Wiles, the invincible monk in the world, is still the place that the mathematics departments of the world yearn for.

The remaining “Mathematics of the United States” and “Mathematical Inventions” in Germany are like Wudang and Mingjiao. They are also top-notch presences in martial arts, and they are in need of storms in their respective fields.

Back at Butler College of Accommodation, Lu Qiujian assembled various accessories together. After debugging, he installed various software. After everything was done properly, Lu Qiujian tested the speed of the computer and then nodded in satisfaction. Although the computer he assembled looks inconspicuous, it is already functionally comparable to some minicomputers.

After taking no rest, Lu Qiujian made an electronic version of his thesis using LaTeX software according to the previous preparations. When the class was on Monday, he could take a printed copy and show it to Professors Gals and Wyeth Yes, then Professor Wiles helped himself submit.