

Date: February 22, 2022  
Media: The Standard  
Online Version: [Link](#)



# It all adds up to awards

Natasha Tai

**M**ATHEMATICS IS NOT a popular subject among Hong Kong students, and is more often than not one of their least favorite subjects.

But for Chan Tsz-hin, a Pui Chin Middle School student who is now attending university, mathematical problems are the ones he enjoys solving.

Having always had an interest in the subject, Chan's curiosity began in secondary school, where he was first introduced to advanced mathematics.

His teacher was explaining the concept of continuous functions, and Chan was greatly impacted by his enthusiasm.

"That was when I realized that mathematics is not simply addition, subtraction, multiplication and division, but it also involves logic. The process of proving and the results are elegant and astounding."

People tend to dislike things they fail at. To the majority who do not share the same enthusiasm for problem solving, Chan offered some advice: "You need to have a solid foundation and practice the basics carefully. If you don't understand something, ask the teacher. You can also ask your classmates to solve problems together."

It was this interest toward the mechanics of mathematics that led to Chan's research

report titled *On Non-Torsion Solutions of Homogeneous Linear Systems over Rings*. "The topic was based on a problem I encountered in another maths competition regarding simultaneous equations. I found the problem interesting and thus decided to keep working on it," Chan said.

His research took more than a year. Chan's 20-page report was commended for its ability to solve problems at a post-graduate level, demonstrating exceptional strength in analytical mathematics and science. His report won him the Gold Award for the 2021 Hang Lung Mathematics Awards – a millennial event that encourages secondary school students to fulfill their potential in mathematics and science, stimulating those with a passion and interest toward the subject.

Coorganized by Hang Lung Properties and the Hong Kong University of Science and Technology, the award requires participants to research a project on a chosen topic in mathematics and write a report that discusses their methodology, research and results. Select participants are then to present an oral defense.

"It is very encouraging to see a strong turnout of high-quality research reports submitted this year after a long disruption in classroom learning. I hope that the participation of our young talented students in this competition would ignite their life-

long passion for mathematics, science and technology," said Hang Lung Properties chairman Ronnie Chan Chi-hung.

Richard Schoen, 2017 Wolf Prize laureate in mathematics and chair of the 2021 Hang Lung Mathematics Awards Scientific Committee, expressed his appreciation of the high standard research reports submitted by participants.

"The quality of the research reports submitted by the participating teams to the competition is very impressive to me. The breadth of topics, the depth and clarity of the solutions given are very high," he said. "The ability to model and isolate the central features of a complex problem – and to develop a language and method to solve it efficiently – are tools which will serve our students well in the future. I hope they could further use these abilities to advance the century-long development of mathematics, or apply them to the immediate good of society and mankind."

The winners will be sharing the prize money of HK\$1 million with five other honorable-mention award winners.

Currently studying mathematics in Imperial College London, Chan plans to use his portion of the prize money for his tuition fees. "I have yet to consider my future beyond graduation, but I would love to continue my pursuit of studying mathematics, especially algebraic geometry."