

DEPARTMENT OF MATHEMATICS

The 15th Epsilon Fund Award to Top Students

The Epsilon Fund Award was established in 2006 with donations from faculty of the Department of Mathematics, and from the departmental fund to honor excellent students: undergraduates and postgraduates who excel in mathematical scholarship and research. One hundred and ten students have been awarded since its establishment. This year eleven students are nominated for this honourable award. Each of them possesses a very high cumulative grade average, especially in mathematics subjects, and some have received multiple graduate program offers from famous universities.

Eleven Mathematics students receive the Epsilon Fund Award

Two postgraduates:

1. Yanze CHEN (Year 3; PhD)

陳彥澤：三年級哲學博士(數學) 研究生

Admitted under the Hong Kong PhD Fellowship Scheme (HKPFS), Yanze is in his third year of study pursuing the Doctor of Philosophy in Mathematics. He likes studying number theory and automorphic forms, elliptic curves and modular forms, and has obtained grade A/A+ in all mathematics courses. “Yanze is a hard working student. He has made steady progress in his research. In the past year he obtained good results in two problems: (1) He extended the Weil representation to certain twisted loop groups. (2) He proved the type-two theta lift of a cusp form is an Eisenstein series. Both results are publishable, and he is preparing the papers and will submit them next year,” commended Professor Yongchang ZHU who is Yanze’s research supervisor. Yanze is the recipient of the yearly Din-Yu Hsieh Teaching Award since 2017. He got First Class Teaching Award twice. He attributes his academic excellence to “driven by interest and keep moving”. He benefited a lot from his tutorial work. He said, “While preparing tutorials I tried to organize the knowledge in the most conceptual way, in which I also gain a better understanding to them.” Yanze said he would continue to work hard for his research.



2. Yipei CHEN (Year 3; PhD)

陳億沛：三年級哲學博士(數學) 研究生

Yipei is currently a third-year student pursuing the Doctor of Philosophy in Mathematics under the supervision of Professor Kun XU. “Yipei has been working on the development of 3D open-form on unstructured mesh for the non-equilibrium flow computation. The scheme is based on the unified gas-kinetic wave-particle approach, which innovatively bridges the modeling of Boltzmann and Navier-stokes equations, and provides a multi-scale dynamic according to the local mesh size and time step scale. The open-form is extremely useful for the study of non-equilibrium flow, such as the gas dynamics around hypersonic vehicle in near space flight,” Prof. Xu remarked. Yipei enjoys studying applied mathematics and scientific computation courses which he gets mostly A/A+. MATH5353 (Multiscale Modeling and Computation for Non-equilibrium Flows), in particular, impresses him a lot, as the techniques and ideas learned can be applied to his research. Yipei is awarded the 2019-2020 Best TA Service Award. He is also the recipient of the Din-Yu Hsieh Teaching Award (Second Class) for 2018-2019. “Be curious and always keep yourself in the ascending stage. Set small goals, plan your schedule, and most importantly, stick to it. There is always frustration in research and life, just review, analyse, and spend time on extracurricular activities like exercise,” advised by Yipei for tips to achieve academic excellence.



Nine undergraduates:

3. Deepesh SINGHAL (Year 4: IRE)

四年級理學士(數學) - 國際科研本科生

Deepesh is our final-year student pursuing the elite IRE (International Research Enrichment) program. He has a great passion in mathematics. “Follow your passion. Find daily routines that keep you productive. Don’t worry too much about your grades” is the advice given by Deepesh on achieving academic excellence. Deepesh obtains grade A/A+ in seventeen mathematics courses. Among which five are of postgraduate level. He has joined the Simon Marais Mathematics Competition for years. In 2019 he ranked first at HKUST, his own university, and won Stonehage Fleming/Marais Prize in the competition. Deepesh is also the recipient of several scholarships, including the University Scholarship, the Chern Class Talent Scholarship, the Chern Class Achievement Scholarship, the HKSAR Government Scholarship Fund–Reaching Out Award, the Research Travel Grant for participating in Joint Math Meeting, the School of Science Exchange Scholarship to National University of Singapore and the Lee Hysan Overseas Scholarship for participation in the San Diego State University REU in summer 2019. Deepesh will begin his Ph.D. study with stipend at UC Irvine after graduation from HKUST. He also gets offer from University of Georgia, University of Utah and Ohio State University.



4. Xinyi WANG (Year 4; AM)

王心怡：四年級理學士(數學) - 應用數學本科生

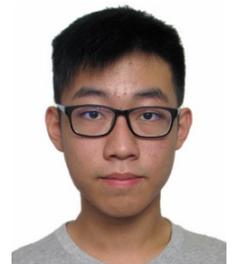
Xinyi is in her final year pursuing the Bachelor of Science (Mathematics) Degree in the Applied Mathematics Track. She is also taking a second major program in Computer Science. With outstanding academic results, Xinyi has been awarded the Chern Class Talent Scholarship, the University Scholarship Scheme for Continuing Undergraduate Students and the Chern Class Achievement Scholarship. She went for study exchange to University of California, Los Angeles supported by the HKSAR Government Scholarship Fund-Reaching Out Award. “Be brave and work hard” is the motto advocated by Xinyi in her study. Xinyi gets remarkably good results for her applied mathematics and computer science courses. Among such fifteen courses of grade A/A+, she enjoys MATH2431 (Honors Probability) the most as Prof. Zhigang Bao’s teaching is brilliant. She learnt the knowledge profoundly from him. Xinyi is going to start a new study life at University of California, Santa Barbara after her graduation from HKUST. She has received from UCSB an Academic Excellence Fellowship to pursue the Ph.D. program in Computer Science. Xinyi receives also the Joseph Needham Merit Scholarship from Joseph Needham Foundation for Science and Civilisation.



5. Wang Hei IP (Year 3; MAEC)

葉泓希：三年級理學士(數學與經濟)本科生

Wang Hei is a third-year student in the program of Bachelor of Sciences Degree in Mathematics and Economics. Being outstanding academically, Wang Hei obtains grade A/A+ in almost all mathematics and economics courses. His cumulative grade point average is over point 4. He is awarded the University Admission Scholarship and the AEON Credit Service Scholarship. “Only those courses you are interested in give you ‘beautiful grade’, exclaimed Wang Hei who thinks “interest’ is the most important element that drives him to study hard. He encourages students to go for the course they like. For those difficult required courses, they may try to visualise every concept whenever possible for it helps both in understanding and memorising the concept. Among all courses that Wang Hei has taken, he is particularly fond of MATH4321 (Game Theory) because it integrates economics and mathematics. He can use mathematics techniques to give rigorous proof or computation to some decision-making concepts from economics. Wang Hei likes research work. He is working with an Economic professor on a research project in Filipino domestic workers’ financial choices.



6. Kin Aun TAN (Year 3; PMA)

三年級理學士(數學) - 純粹數學高級班本科生

Kin Aun is a third-year student pursuing the Bachelor of Science (Mathematics) Degree in Pure Mathematics (Advanced) Track. He performs incredibly fabulous by achieving a cumulative grade point average over point 4 since his year-one study. He gets grade A/A+ in all the mathematics courses, and thirteen of them are of A+. MATH3043 (Honors Real Analysis) is the mathematics course that Kin Aun enjoys the most because it is challenging and he has learnt a lot from this course. Kin Aun receives numerous awards and scholarships. Before joining HKUST, he won two bronze medals in International Mathematical Olympiad and two silver medals in Asian Pacific Mathematical Olympiad. He was listed in top quartile listings for Paris category in 2018 Simon Marais Mathematics Competition and won the 7th HKUST Undergraduate Mathematics Competition for Junior Category in 2019. Kin Aun is also awarded the University Admission Scholarship, the Dean's List Award, the Chern Class Talent Scholarship and the Hong Kong Scholarship for "Belt and Road" Students (Malaysia) due to his outstanding academic results. Working hard is Kin Aun's tips for achieving academic excellence. He believes that perseverance can beat anything. Self efforts in learning is as important as a good guidance from a great instructor.



7. Shuoran WANG (Year 3; MAEC)

王燦然：三年級理學士(數學與經濟)本科生

Shuoran is a third-year student doing double majors. Bachelor of Sciences Degree in Mathematics and Economics is his primary major program of study, and Computer Science program is his second major. Achieving academic excellence, Shuoran obtains a cumulative grade point average over point 4. He gets A/A+ in most of his mathematics, economics and computer science courses. Shuoran receives the Dean List's Award throughout all semesters of his study. The University also bestowed him the University Scholarship for continuing students in 2018 and 2019; the Students' Academic Excellence Award in 2019, and the Cheng foundation Scholarships for Chinese Mainland Undergraduate Students in 2020. Shuoran joined an exchange program to University of Southern California where he achieved brilliantly a GPA of 4.0/4.0. Among the mathematics courses which he took at HKUST, MATH4512 (Fundamentals of Mathematical Finance) attracts him the most because he is passionate about using mathematical tools to solve problems in finance. "Making enough efforts" is Shuoran's advice on reaching academic excellence. He said that there are no shortcuts to it and every effort will pay off eventually. Shuoran also participates actively in a UROP project on economic data analysis.



8. Yujie WANG (Year 3; DSCT)

王雨杰：三年級理學士(數據科學與技術)本科生

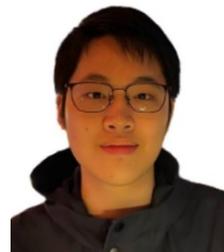
Yujie is a third-year student pursuing the Bachelor of Science Degree in Data Science and Technology. He is also enrolling in the Mathematics (Applied Mathematics) Track as his second major program. Yujie's main interest of study is computer science related to algorithm and cybersecurity. Being an outstanding student, Yujie has achieved grade A+ in numerous data science-related courses, of which ten are mathematics courses. His cumulative grade point average is above point 4. He enjoys MATH3423 (Statistical Inference) the most because it is useful in solving many probabilistic and statistical problems in computer science. Yujie's advice on achieving academic excellence is that one should understand the fundamental concepts, go deeper only when needed, and do not waste too much time on minor and details. Yujie went for study exchange to University of Southern California in 2020 supported by the Overseas Learning Experience Scholarship. He receives the Dean List's Award and the University Scholarship for continuing undergraduate students throughout his years of study.



9. Jingan ZHOU (Year 3; SFM)

周靖安：三年級理學士(數學) - 統計及金融學本科生

Jingan is our third-year student taking dual major programs. He is now pursuing the Bachelor of Science (Mathematics) in Statistics and Financial Mathematics Track as his first major, and the Computer Science as his second major. He also added minor program in Business. Jingan achieves outstandingly in study. He gets a cumulative grade point average over point 4 throughout his years of study and has obtained grade A/A+ for near all courses in mathematics and statistics. Among these courses, Jingan enjoys studying MATH3423 (Statistical Inference) the most because one can try to understand the patterns of randomness in this course. His name has been put in the Dean's List due to his excellent study. He is also awarded the University Scholarship Scheme for Continuing Undergraduate Students in 2019, the Joseph Lau Luen Hung Charitable Trust Scholarship in 2020 and the HKUST Exchange Sponsorship in 2020 for exchange to Columbia University. Jingan's belief for academic success is first, to try to love what you study and be passionate about it; second, to stay hungry, stay foolish, knowing there is a lot more yet to learn; and last but not the least, don't be afraid of asking seemingly stupid questions.



10. Zijun CHEN (Year 2; PMA)

陳梓君：二年級理學士(數學) - 純粹數學高級班本科生

Zijun is doing double majors. Being a year-two student now, he is pursuing the Bachelor of Science (Mathematics) Degree in Pure Mathematics (Advanced) Track which is his first major program of study, and Computer Science program is his second major. Zijun is a diligent student. It is "interest and hard-working" which drives him to achieve academic excellence. He advises that one should have his own choice and judgement of courses. Some courses may be hard to study but we should not pay too much attention to their difficulties. Instead, we should enjoy the learning process from zero understanding to understanding. Zijun believes that the mathematical content is understandable. Zijun has a very high cumulative grade point average. He gets grade A/A+ in many mathematics and computer science courses. He enjoys learning MATH2431 (Honors Probability) and MATH3043 (Honors Real Analysis) which have broadened his understanding of mathematics, particularly in the association between probability and analysis. Zijun is awarded the University Scholarship for continuing students, the Dean's List Award and the Chern Class Scholarship.



11. Ryuichi MAN (Year 2; IRE)

文龍一：二年級理學士(數學) - 國際科研本科生

Ryuichi is an excellent student in the elite IRE (International Research Enrichment) program. Despite being a year-two student, Ryuichi has got A/A+ in almost all courses, and nine of which are mathematics courses. His cumulative grade point average reaches over point 4 throughout all semesters of study. Ryuichi enjoys MATH4023 (Complex Analysis) the most because it is truly surprising to learn that theorems that build up on simple arguments can have far-reaching applications in other fields. When reviewing course materials or doing assignment problems, Ryuichi suggests one to make a good habit of checking where and how each condition or quantity given in the problem is used in the solution or proof. It is often the case that the solution is fallacious if it ignores or leaves unused some of the given conditions. Meticulous checking helps improve one's critical and logical thinking, as well as make sure one really understands all the relevant concepts. Besides, Ryuichi believes it is important to keep in mind the intuition and motivation behind each concept. Instead of remembering lengthy definitions and proofs in paragraph form, it is often easier to memorize them using a picture or a graph. Ryuichi receives the Cheung On Tak Charity Foundation Scholarship, the Chern Class Scholarship and the Dean's List Award.

