DEPARTMENT OF MATHEMATICS

The 11th Epsilon Fund Award to Top Students

The Epsilon Fund Award was established in 2006 with donations from faculty and staff of the Department of Mathematics, and from the departmental fund to honor excellent students: undergraduates and postgraduates who excel in mathematical scholarship and research. More than fifty students have been awarded since its establishment. This year nine students receive the award and three students receive honorable mention. 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.

Nine Mathematics students receive the Epsilon Fund Award

Two postgraduates:

1. **Tao LUO (Year 4; PhD)**
   羅 濤
   四年級哲學博士(數學)研究生

Tao LUO is now our year-four student pursuing the PhD study and is under the supervision of Professor Yang XIANG. "Mr. Luo has obtained energy scaling laws for the problem of elasticity-driven step bunching on epitaxial film surfaces using rigorous analysis approach. This is a significant contribution to the research in applied mathematics and materials science. One of his research papers has been accepted by SIAM Journal on Multiscale Modeling and Simulation, and more are in preparation and will be submitted soon," said Professor Xiang.

2. **Xudan LUO (Year 4; PhD)**
   羅 旭 丹
   四年級哲學博士(數學)研究生

Xudan LUO first came to the Department of Mathematics in 2012 pursuing the PhD study. Professor Yik Man CHIANG is Xudan's thesis supervisor. "Xudan is an analyst with no fear. Together we solved problems concerning taking formal limits of steps tending to zero/infinity for difference operators, thereby establishing difference Nevanlinna theories for both zero-period and infinite-period. The theories allow us to recover Big Picard's theorem in the limit. We have written a paper on this and it is still being refereed," writes Professor Chiang. At present, Professor Chiang and Xudan are working on another paper pertaining to the semi-finite gap (spectra distribution) problems for the Whittaker-Hill linear differential equation. Xudan also spent six months to do a joint work with Professor Mark Ablowitz in Colorado last year, on the topic of an inverse scattering problem for non-liner Schrodinger equation of non-local type with boundary condition at infinity. This topic was totally different from her thesis and Professor Ablowitz complimented her as "a strong mathematician".

Seven undergraduates:

3. **Yuan HUANG (Year 4; MAEC)**
    黃 圓
    四年級數學（數學與經濟）理學士本科生

    Yuan HUANG is one of the outstanding students in the program of Bachelor of Sciences Degree in Mathematics and Economics. Since her study at HKUST in 2012, she has received the Dean's List Award every academic semester. She has also been awarded several scholarships during her study in MAEC, which includes Physics Department Scholarship (2012-13), Scholarship Scheme for Continuing Undergraduate Students (2013-14) and HKSAR Government Scholarship (2014-16). "Yuan took my course in Fall 2014 and ranked number 1 among 120 students, consisting of mostly math majors." said Professor Kin Yin LI, the course instructor of MATH 3033 Real Analysis. Yuan is determined to pursue postgraduate study and she has received offers from PhD programs in Economics at Washington University in St. Louis, UC Davis and UCSB, as well as Master's programs in Economics at Duke University and Master's program in statistics at University of Chicago. Among the offers, she accepts the Washington University in St. Louis and at the same time she is granted the scholarship of McDonnell International Scholars Academy.
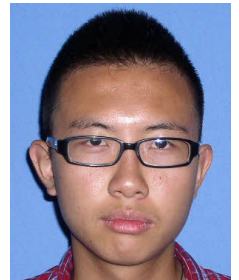
4. **Xiudi LI (Year 3; MAEC)**
    李 秀 頔
    三年級數學（數學與經濟）理學士本科生

    Xiudi LI is undoubtedly a distinguished student in the program of Bachelor of Sciences Degree in Mathematics and Economics. He has been consecutively receiving Kerry Holdings Limited Scholarship and Dean's List Award since his admission to HKUST in 2013. In the current academic year, he is granted the Aji-No-Chinmi Co (HK) Ltd Scholarship for Overseas Experience as an exchange student in Ecole Polytechnique Federale de Lausanne. Besides, Xiudi is keen on participating in research projects. He has taken part in Research in Industrial Projects for Students (RIPS-HK) and also worked on a project proposed by China International Capital Corporation in 2015. He is already admitted to the 2016 Fields Undergraduate Summer Research Program. His future plan is to start his PhD journey in America after graduation.

5. **Zhiming LI (Year 4; PMA)**
    李 知 明
    四年級理學士（數學）– 純粹數學高級班本科生

    Zhiming LI is currently our fourth-year student pursuing the Bachelor of Science (Mathematics) Degree enrolling in the Pure Mathematics Advanced Track. He, as an undergraduate student, first attempted to study a postgraduate course MATH5251 Algebraic Geometry I in year 3 and got the grade "A+", followed by another grade "A+" and "A" in completing MATH 5111 Advanced Algebra I and MATH 5145 Introduction to Lie
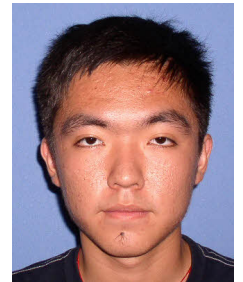
Groups, respectively, in Fall 2015. These splendid results led him to enroll into four more postgraduate mathematics courses in the current semester. "Zhiming has taken many postgraduate courses and get good results. In doing my course Math 5111 last year, his performance was the best among about 15 students, most are PhD students from HKU, CUHK and HKUST," praised Professor Yongchang ZHU, "His performance in my UROP project was also excellent that he was able to solve most of the problems I gave him. The problems were much more difficult than the usual examination problems. Zhiming is one of very few students who can have a career in mathematical research."

6. **Yuan QIU (Year 3; MAEC)**
邱 遠
三年級數學（數學與經濟）理學士本科生

Yuan QIU is our third-year student pursuing the Bachelor of Science Degree in Mathematics and Economics, and also taking Computer Science as his second major. When Yuan was in the high school, he won the first prize in National Olympiad for Informatics in 2009-2011. Demonstrating great passion in studying in both majors, Yuan achieves extraordinary academic results and has never missed the Dean's List Award since he entered HKUST. He was also granted Kerry Holdings Limited Scholarship during 2013-2015. "Yuan is particularly strong in programming skills, having working knowledge of most common computer languages," commented Professor Yue-Kuen KWOK. Besides his academic achievement, Yuan is also actively involved in extra-curricular activities by being a student ambassador in the Global Student Programs Office in HKUST. Yuan plans to pursue a master or doctoral degree after his graduation.
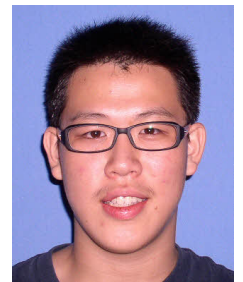
7. **Jiaqi XIE (Year 4; CS)**
謝 佳 騏
四年級理學士（數學） － 計算機科學本科生

Jiaqi XIE is now in his final year study pursuing the Bachelor of Science (Mathematics) Degree in Computer Science Track, as well as minoring in Business. His impressive academic results bring him the awards of Dean's List Award and Scholarship Scheme for Continuing Undergraduate Students. In Spring 2014-15, Jiaqi joined the exchange program to The Georgia Institute of Technology and gained the HKSAR Government Scholarship Fund - Reaching Out Award. In the coming summer, Jiaqi, together with his team members, will be representing HKUST to participate in a robot competition. For his future study, Jiaqi has been accepted to the master programs of UC Berkeley, Columbia and Cornell, and he will pursue the Master Engineering program of Electrical Engineering and Computer Sciences at UC Berkeley, concentrating on Data Science & Systems.

8. **Keyu ZHANG (Year 4; MAEC)**
張 可 鈺
四年級數學（數學與經濟）理學士本科生

Keyu ZHANG is one of the outstanding students in the program of Bachelor of Sciences Degree in Mathematics and Economics. Achieving academic excellence brought multiple awards and scholarships to Keyu during her study at HKUST, which include Dean's List Award, Kerry Holdings Limited Scholarship, The Joseph Lau Luen Hung Charitable Trust Scholarship, The Cheng Foundation Scholarships for Chinese Mainland Undergraduate Students and Scholarship Scheme for Continuing Undergraduate Students. Keyu has joined the exchange program to Northwestern University in Fall 2014 and received the HKSAR Government Scholarship Fund - Reaching Out Award. For her future plans, Keyu would like to be a trader working in an investment bank in Hong Kong.
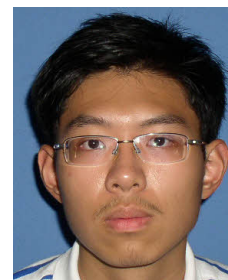
9. **Songhao ZHU (Year 3; PMA)**
朱 淞 豪
三年級理學士（數學） – 純粹數學高級班本科生

Songhao ZHU is currently our third-year student pursuing the Bachelor of Science (Mathematics) Degree in the Pure Mathematics Advanced Track. He has also declared a minor program in Physics. Owing to Songhao's outstanding academic result, he was presented awards and scholarships including Dean's List Award, University Scholarship and Scholarship Scheme for Continuing Undergraduate Students. He was also the champion of the 3rd HKUST UG MATH Competition (Junior competition) in 2015. With his enthusiasm in mathematics, Songhao plans to continue studying mathematics after graduation.

Three Mathematics students receive Honorable Mention

1. **Ling Hon KWOK 郭 凌 漢**
   (UG Year 4; MAEC) *left photo*

2. **Yuxiao LI 李 雨 瀟**
   (UG Year 4; MAEC) *middle photo*

3. **Yifeng YANG 杨 一 峰**
   (UG Year 2; SFM) *right photo*