
S.-T. Yau Mathematics Awards

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2013 S.-T. Yau College Mathematics Contests Awards

The 2013 Shing-Tung Yau College Mathematics Contests oral exams were successfully completed in Beijing on August 12, 2013. On July 9 and 10, 2013 written exams were taken place. A group of selected students were chosen for oral exams based on the written exams scores. The Shing Tung Yau College Mathematics Contests awards ceremony was taken place on August 12, 2013. Professor Shing Tung Yau, Prof. Zhongli Ding (Vice President of Chinese Academy and Academian), Prof. Jining Chen (President of Tsinghua University), Prof. Yang Lo and other members of the scientific committee were present to honor the gifted students. The following is the list of students who got the awards.

2013 S.-T. Yau Colege Mathematics Contests Team Medals

Gold Medal: Peking University (Jingwei Xiao, Xinquan Zhuang, Jun Su, Yu Bai, Zhengyu Huan)

Silver Medal: Tsinghua University (Li Lai, Zhiwei Zhen, Jialun Li, Yixiang Mao, Boya Zhang); Peking University (Shaokun Li, Yu Zhao, Jihao Liu, Jiarui Lu, Liying Li); Peking University (Shengpei Yan, Zhuang Tao, Zhechi Cheng, Yiqiao Zhong, Song Mei)

Bronze Medal: University of Science and Technology of China (Zhilei Wang, Ruotao Wang, Yizhen Zhao, Xiangyu Luo, Yuren Huang); University of Science and Technology of China (Ruizhi Zhang, Huajie Li, Peng Zhen, Wei Han, Tangxin Jin); Zhejiang University (Shizhang Li, Jun Wang, Renjie Lv, XigeYang, Zhao Liu); Fudan University (Nianzhi Qiu, Ruipeng Zhu, Yingdi Qin, Zongyi Li, Huajie Qian); Fudan University (Shijie Zhou, Han Zhou, Lvzhou Chen, Zongyuan Li, Yishu Wei)

S.-T. Yau Colege Mathematics Contests Medals (Individual Overall Winners)

Gold Medal: Dongyi Wei (Peking University)

Silver Medal: Shizhang Li (Zhejiang University), Jingwei Xiao (Peking University), Ziquan Zhuang (Peking University)

Bronze Medal: Yixiang Mao (Tsinghua University), Jialun Li (Tsinghua University), Jun Su (Peking University)

Loo-Keng Hua Medals (Winners in Analysis)

Gold Medal: Dongyi Wei (Peking University)

Silver Medal: Jingwei Xiao (Peking University), Jun Su (Peking University), Shizhang Li (Zhejiang University)

Bronze Medal: Yichang Cai (Tsinghua University), Ziquan Zhuang (Peking University), Wenhua Yu (Tsinghua University), Hao Zhang (Xi'an Jiaotong University), Ruiwen Shu (Peking University), Zhiwei Zheng (Tsinghua University)

Honorable Mention: Ao Sun (Tsinghua University), Jialun Li (Tsinghua University), Yu Zhao (Peking University), Wenqi Lv (Wuhan University), Qidi Zhang (Zhejiang University), Liying Li (Peking University), Congling Qiu (Tsinghua University), Nianzhi Qiu (Fudan University), Xiaoyu Duan (Wuhan University), Xingyu Li (University of Science and Technology of China), Zhang-chi Chen (Tsinghua University), Li Lai (Tsinghua University), Jiajiang Liao (Fudan University), Xiaowei Tan (University of Science and Technology of China), Dongming Huang (Peking University), Lingrui Ge (Nanjing University), Chuqi Cao (University of Science and Technology of China), Chenlin Gu (Fudan University), Zongyuan Li (Fudan University), Yingdi Qin (Fudan University), Ruida Di (Peking University), Zheshi Cheng (Peking University)



Shing-Shen Chern Medals (Winners in Geometry and Topology)

Gold Medal: Dongyi Wei (Peking University)

Silver Medal: Shiwei Liu (Taiwan University), Jingwei Xiao (Peking University), Ziquan Zhuang (Peking University)

Bronze Medal: Renjie Lv (Zhejiang University), Zheshe Cheng (Peking University), Shenghan Zhang (Tsinghua University), Shizhang Li (Zhejiang University), Yingdi Qin (Fudan University), Jun Su (Peking University)

Honorable Mention: Xiao-wei Tan (University of Science and Technology of China), Peng Zheng (University of Science and Technology of China), Jia-lun Li (Tsinghua University), Zhi-wei Zheng (Tsinghua University), Xin Fu (Nanjing University), Nian-chuan Zhang (Beijing Normal University), Yu Zhao (Peking University), Lv-zhou Chen (Fudan University), Yi-yun Xu (Taiwan University), Jun Wang (Zhejiang University), Si-yi Zhang (Peking University), Yu-hang Liu (Fudan University), Ling-bo Guo (Taiwan University), Biao Ma (Lanzhou University)

Wei-Liang Chow Medals (Winners in Algebra and Number Theory)

Gold Medal: Jun Su (Peking University)

Silver Medal: Dongyi Wei (Peking University), Ziquan Zhuang (Peking University), Huajie Li (University of Science and Technology of China)

Bronze Medal: Peng Zheng (University of Science and Technology of China), Zhitao Han (Peking University), Jialiang Zou (Peking University), Jialun Li (Tsinghua University), Jin Gong (Wuhan University), Jingwei Xiao (Peking University)

Honorable Mention: Yi-lin Zhang (Peking University), Wei-zhong Chen (Taiwan University), Hao Zhang (Xi'an Jiaotong University), Yu Zhao (Peking University), Tian-yi Xu (Fudan University), Ying-di Qin (Fudan University), Zhang-chi Chen (Tsinghua University), Li Lai (Tsinghua University), Rui-wen Shu (Peking University), Huilin Lin (Tsinghua University), Shi-wei Liu (Taiwan University), Xing-yu Li (University of Science and Technology of China), Fan-chen He (Fudan University), Nian-chuan Zhang (Beijing Normal University), Li-wei Zeng (Peking University), Meng-dong Li (Tsinghua University), Zhi-lin Luo (Zhejiang University), Wei-nan Lin (Peking University), Qi Jiang (Tsinghua University)

Chia-Chiao Lin Medals (Winners in Applied and Computational Mathematics)

Gold Medal: Dongyi Wei (Peking University)

Silver Medal: Yixiang Mao (Tsinghua University), Zhengyu Huang (Peking University)

Bronze Medal: Weijia Wang (Shandong University), Huajie Qian (Fudan University), Song Mei (Peking University)

Honorable Mention: Bao-you Qu (Shandong University), Li-ying Li (Peking University), Han-zheng Zhai (Shandong University), Qiao Wang (Beijing Normal University)

University), Chen-yu Ni (Fudan University), Yu-chen Jiang (Peking University), Li-wei Zeng (Peking University), Qi-yun Xu (Taiwan University), Chen-lin Gu (Fudan University), Wei-feng Wang (Henan University), Li Li (Shandong University), Le-wei Zhao (Wuhan University), Yu-ren Huang (University of Science and Technology of China), Jun Su (Peking University), Ya-Jiao Li (Henan University)

Pao-Lu Hsu Medals (Winners in Probability and Statistics)

Gold Medal: Dongyi Wei (Peking University)

Silver Medal: Liyin Li (Peking University), Yu Bai (Peking University)

Bronze Medal: Zongyuan Li (Fudan University), Yunxiao Li (Peking University), Yiqiao Zhong (Peking University), Fan Yang (Tsinghua University)

Honorable Mention: Yi-shu Wei (Fudan University), Xi-ge Yang (Zhejiang University), Jie Ruan (Fudan University), Yi-xiang Mao (Tsinghua University) Tong Li (Fudan University), Yu-ting Jiang (Taiwan University), Yu-ming Wang (Peking University), Song Mei (Peking University), Zhi-wen Zheng (Tsinghua University), Lu-zhou Chen (Fudan University), Wei Han (University of Science and Technology of China), Wei-nan Lin (Peking University), Xiang-yu Luo (University of Science and Technology of China), Zheheng (Tsinghua University), Jia-sheng Shi (Zhejiang University), Li-wei Zeng (Peking University), Shuo Wang (Xi'an Jiaotong University), Kun Liu (Fudan University), Le-ying Guan (Tsinghua University)

2014 S. T. Yau College Mathematics Contests Individual Medals

L. K. Hua Medals (2014 Winners in Analysis)

Gold medal: Hao Song, Zhejiang University

Silver medal: Jiexiang Zhu, Fudan University

Sliver medal: Hang Yuan, Wuhan University

Silver medal: Donghao Wang, Peking University

Silver medal: Zhilin Luo, Zhejiang University

Bronze medal: Hao Wu, Peking University

Bronze medal: Jinmin Wang, Fudan University

Bronze medal: Dawei Shen, University of Science and Technology of China

Bronze medal: Zichao Long, Peking University

Bronze medal: Zhitao Han, Peking University

S. S. Chern Medals (2014 Winners in Geometry and Topology)

Gold medal: Congling Qiu, Tsinghua University

Silver medal: Weibo Fu, University of Science and Technology of China

Silver medal: Zhilin Luo, Zhejiang University
Silver medal: Ao Sun, Tsinghua University
Silver medal: Bingyu Zhang, Hunan University

Bronze medal: Lingbo Han, Taiwan University
Bronze medal: Han Zhitao, Peking University
Bronze medal: Hao Song, Zhejiang University
Bronze medal: Hang Yuan, Wuhan University
Bronze medal: Zheng Zhiwei, Tsinghua University

W. L. Chow Medals (2014 Winners in Algebra and Number Theory)

Gold medal: Ruotao Yang, University of Science and Technology of China

Silver medal: Zhouxing Mao, Fudan University
Silver medal: Cheng Meng, Tsinghua University
Silver medal: Congling Qiu, Tsinghua University

Bronze medal: Anningzhe Gao, Tsinghua University
Bronze medal: Haoyang Guo, University of Science and Technology of China
Bronze medal: Zhan Jiang, Tsinghua University
Bronze medal: Weifeng Sun, Tsinghua University
Bronze medal: Tianyi Xu, Fudan University
Bronze medal: Yu Zhao, Peking University

C. C. Lin Medals (2014 Winners in Applied and Computational Mathematics)

Gold medal: Liwei Zeng, Peking University

Silver medal: Chuqi Cao, University of Science and Technology of China

Silver medal: Fanchen He, Fudan University

Silver medal: Mingchen Xia, Tsinghua University

Bronze medal: Zichao Long, Peking University

Bronze medal: Ao Sun, Tsinghua University

Bronze medal: Qingcan Wang, Peking University

P. L. Hsu Medals (2014 Winners in Probability and Statistics)

Gold medal: Dongming Huang, Peking University

Silver medal: Guanhua Fang, Fudan University

Silver medal: Hao Yin, Fudan University

Bronze medal: Jieliang Hong, Peking University

Bronze medal: Zongyuan Li, Fudan University

Bronze medal: Yuchen Liao, University of Science and Technology of China

Bronze medal: Changji Xu, Tsinghua University

S. T. Yau Medals (Individual Overall) 2014 All-Around Winners

Gold medal: Congling Qiu, Tsinghua University

Silver medal: Zhilin Luo, Zhejiang University
Silver medal: Hao Song, Zhejiang University
Silver medal: Ao Sun, Tsinghua University

Bronze medal: Dongming Huang, Peking University
Bronze medal: Hang Yuan, Wuhan University

2013 S.-T. Yau High School Mathematics Awards

Sponsored by Professor Shing-Tung Yau and Taikang Life Insurance Company, the S.-T. Yau High School Mathematics Awards, or YHMA, was established in 2008 to encourage high school students worldwide to participate in project-based competition in mathematical sciences. 2013 is the sixth year of this program. The final competition of the sixth S.-T. Yau High School Mathematics Awards was held from December 15 to December 16, 2013. The awards ceremony took place in Beijing on December 16, 2013. The following is the list of winners to 2013 S.-T. Yau High School Mathematics Awards.

Gold Awards

Title: 3D Surface Fabrication using Conformal Geometry

Members: Yuanqi Zhang

Adviser: Xianfeng Gu

School: St. Gregory College Preparatory School, USA

Silver Awards

Title: The geometrical analysis of the path of free kick

Members: Zuoru Yang, Hongyuan Fu, Runda Ji

Adviser: Fengyi Pan

School: Beijing Zhongguancun High School

Title: A General Algorithm of Flattening Convex Prisms

Members: Chenglei Li, Jingqi Zhou

Adviser: Minghuang Chai

School: NUS High School, Singapore

Bronze Awards

Title: The solvability of negative Pell equation

Members: Jiaqi Wang, Lide Cai

Adviser: Xiangxue Jia

School: Beijing National Day School

Title: q -Symmetric Polynomials and nilHecke Algebras

Members: Ritesh Ragavender

Adviser: Alexander Ellis

School: South Brunswick High School, USA

Title: Quantum Watermarking in M-band Wavelet Domain

Members: Tong Liu, Xuan Xu

Adviser: Yulian Ren

School: The High School Attached to Jilin University

Title: Feature Identification for Colon Tumor Classification

Members: Anthony Hou

Adviser: Ernie Esser

School: Arcadia High School, USA

Honorable Mention

Title: A New Secure Distributed Storage Scheme for Cloud-Geometric and Algebraic design and Implementation

Members: Haoting Zhang, Zhiwei Tan

Adviser: Canlin Huang

School: Pui Ching Middle School, Macau

Title: Research on some particular simple groups by using elementary methods

Members: Zhiyin Shao, Ziqi Zhao, Ruiheng Xie

Adviser: Min Xu

School: Guangdong Guangya High School

Title: A study on the probability issue of "a frog jumping one meter a time"

Members: Tianbo Qi, Yintai Zhang

Adviser: Jinsong Li

School: The High School Attached to Tsinghua University

Title: Study of Evacuation in High-rise Buildings And Attempt of Evacuation Plan Devisal with Functional Knowledge

Members: Datong Zhou, Yuhan Wang

Adviser: Jun Pan

School: Hangzhou Foreign Language School

S. T. Yau High School Mathematics Awards in Taiwan

In the year 2009, Professor Shing-Tung Yau initiates to hold an annual mathematics competition for high school students in Taiwan, aiming to promote intellectual discovery and to stimulate scientific creativity among the youth of Taiwan. This idea was made possible thanks to the generous support from Dr. Fan-cheng Tseng, the Vice Chairman of TSMC.

Each team shall consist of one student and shall be led by a teacher of the same school. Even though the student may receive some advice from the teacher, it is required for the student to perform an independent study. The topic can be any problem in pure or applied mathematics of any level. There is no limitation of the mathematical machinery involved in the research, however, the student must demonstrate his command of the tools that were exploited.

Among all teams, about eight to twelve teams was advanced into the final competition each year. There will be:

1. No more than one Gold Award, which is NTD60,000 for the student and NTD30,000 for the teacher.
2. No more than three Silver Award, which is NTD40,000 for each student and NTD20,000 for each teacher.
3. Honorable Mentions, which is NTD20,000 for each student and NTD10,000 for each teacher.
4. Judge's Award, which is NTD5,000 for each student.

A school will receive Excellent Group Award if there are more than two awardees from the same school and at least one of them is awarded Gold or Silver medal. The awardees of Gold Award and Silver Award will receive scholarship up to NTD480,000 and NTD240,000 respectively if they major in Mathematics or Applied Mathematics during their studies in university.

The award has stimulated young students for mathematical studies. Many of the awardees and participants chose to major in mathematics at the end. The Award also drew lots of attention from the soci-

ety. For example, the touching story of the 2012 gold medalist Che-Kuan Su was on TV and the interesting work of the 2013 gold medalist He-Chien Chen appeared in all major newspaper.

2013 S. T. Yau High School Mathematics Awards in Taiwan

Gold Award

Topic: Loli fields on grids

Member: He-Chien Chen

School: National Taichung First Senior High School

Silver Award

Topic: Vectors and area of polygons

Member: Yu-Ting Chen

School: Taipei First Girls High School

Bronze Award

Topic: On Intercepts of same ratio in simplexes

Member: Tsung-Hsiun Tsai

School: Taipei Municipal Jianguo High School