



2018 丘成桐中学科学奖优胜奖获奖名单

获得数学优胜奖的团队是：

复旦大学附属中学

参赛学生：卢舟扬

指导教师：谢大军

论文题目：On some types of the infinite product

四川省成都市石室中学

参赛学生：牛睿杰

指导教师：张伟年、李威

论文题目：A study on periodic points of tent maps

Ross Mathematics Program

参赛学生：施陆辰、Sunay Joshi, Ritwick Bhargava

指导教师：Xiudi Tang

论文题目：Congruence of Linear Symplectic Forms by the Symplectic Group

南京师范大学附属中学

参赛学生：邱瑞昕、袁勾如月

指导教师：周盾、曾素樵

论文题目：A property of integer-valued Lyapunov function for a class of totally nonnegative matrices

清华附中国际学校

参赛学生：李利鑫

指导教师：杨青明

论文题目：Directed graph method for intelligent vehicle to orderly pass through unsignalized intersection and its application



获得物理优胜奖的团队是：

Indian Springs School

参赛学生：王靖

指导老师：马骋

论文题目：The Frequency Analysis and Resonance Simulation of Khoomei Singing

Temasek Junior College & Anglo-Chinese Junior College

参赛学生：Wang Jiwei, Wang Yiyang, Zhang Haoyu

指导老师：Dr. Victor Wang Peng Cheng, Mr. Khoh Rong Lun

论文题目：Investigating the Aerodynamic Performance of Biomimetic Gliders for Use in Future Transportation

中国人民大学附属中学

参赛学生：李岚淞、赵俊宁

指导老师：张永平

论文题目：Rotation Study of Soft Magnetic Alloy Ring Under Thermo-Magnetic Interaction

广州市第六中学

参赛学生：吴梓豪、付宇文

指导老师：璩斌

论文题目：Study on the Mechanism of the Forepart of the Sneakers Getting Wet when Walking on the Road with Standing Water

杭州学军中学（西溪校区）

参赛学生：杨悦宁、庄逸灵、谢文远

指导老师：黄晶、邱为钢

论文题目：The rolling motion of constrained three-dimensional rigid bodies



获得化学优胜奖的团队是：

北京十一学校

参赛学生：范文楷

指导老师：Wang Shu、Mingjun Teng

论文题目：New use of drug, Galanthamine as both Amyloid-Beta inhibitor and AChE inhibitor

长郡中学

参赛学生：钟中日

指导老师：梁云

论文题目：Synthesis of Highly Functionalized Quinoline Derivatives via the Ring-Expansion Reaction of Indole Derivatives

上海外国语大学附属外国语学校

参赛学生：胡诗成

指导老师：郑耿锋

论文题目：Silk Derived Highly Dispersed Ni supported by N-Doped Carbon Nanosheet toward Electrochemical CO₂ Reduction

南京外国语学校

参赛学生：周阅微、王涵悦、方世文

指导老师：许亮亮

论文题目：Achieving Freestanding Rich-Mixed-Valence MnxCoySz/CNT Film Electrodes Toward Foldable Ultrahigh Volume Energy Density All-Solid-State Supercapacitors

北京市第四中学

参赛学生：潘紫琪

指导老师：孔丽燕、辛加余

论文题目：Research on the Conversion of Waste Straw into High-octane Gasoline



获得生物优胜奖的团队是：

浙江省杭州第二中学

参赛学生：徐瓯源

指导老师：吴世华、黄雄伟

论文题目：**Identification of the gene deficiency responsible for white-flowered butterfly pea and potential applications for genetic engineering of flower color**

华东师范大学第二附属中学

参赛学生：谢承翰

指导老师：曲耀

论文题目：**Research on the Effects of Plant Audio Technology on the Growth and Pathogenicity of Fungi—— A New Physical Sterilization Technology**

成都市第七中学

参赛学生：邹普越、曹楚林

指导老师：汤洋、沈晶晶

论文题目：**A new discovery of the key stress protein HSP90 in regulating the regenerative ability of the planarian**

新疆省克拉玛依市第一中学

参赛学生：李依然、杨丽佳、林珑玉

指导老师：宋姗姗、伍军

论文题目：**A Preliminary Study of a New Inoculation Method for "Jinhua" Fungus on Fermented Fu Tea**

北师大二附中国际部

参赛学生：张文瑞

指导老师：陈得锋

论文题目：**Isolation of antiphytopathogenic bacteria from soils in Beijing and initial investigation of their antifungal activity**



获得计算机优胜奖的团队是：

Cranbrook Schools

参赛学生：Yang Chen

指导老师：Jazon Zhao

论文题目：Active Learning over DNN: Automated Engineering Design Optimization for Fluid Dynamics Based on Self-Simulated Dataset

中国人民大学附属中学

参赛学生：康哲涵

指导老师：Ali Mirtar

论文题目：Translation system from natural language to sign language by using HamNoSys

上海市上海中学

参赛学生：梅毅轩

指导老师：姜忠鼎、吴奕明

论文题目：Compound Object-Detection Algorithm for Eye Tracking in Virtual Reality Head-Mounted Display

杭州外国语学校

参赛学生：徐芷涵、何宝琦、徐学强

指导老师：陈铁明

论文题目：Domain Knowledge Graph Integrated Intelligent Question Answering System For Childcare

广州市第六中学

参赛学生：蒙永翔、陈文妍

指导老师：梁靖韵

论文题目：LittleGAN: Conditional Facial Image Generation and Adjustment



获得经济金融建模优胜奖的团队是：

南京外国语学校

参赛学生：杨若曦、李河图、田晓天

指导老师：巫强

论文题目：A Comparative Study on Online and Offline Pricing of Chain Brand Merchant on the Catering Takeaway Platform

北京人民大学附属中学

参赛学生：童培轩

指导老师：彭俊超、徐腾达

论文题目：A Discussion on Inverted-U Shape Relationship between Social Autonomous Consumption and Medical Insurance Fund Size

北京四中

参赛学生：徐仕雄、刘佳源

指导老师：张舟

论文题目：The Effect of the Bitcoins Inclusion of on a Portfolio Typical to Chinese Investors

Princeton International School of Mathematics and Science

参赛学生：Lixin Huang

指导老师：Gong Xiang

论文题目：Some Empirical Studies on Chinese Crude Oil Futures

清华大学附属中学

参赛学生：田肇阳、钱成、曹凌微

指导老师：吴昊、王殿军

论文题目：Evaluation and Prediction of Cell Phone Sales Based on Various Techniques



2018 丘成桐中学科学奖铜奖获奖名单

获得数学铜奖的团队是：

华南师范大学附属中学国际部

参赛学生：陈兆君

指导教师：郝保国

论文题目：Pancyclicity and Cycle Length Distribution of Generalized Petersen Graphs

Phillips Academy Andover

参赛学生：Guanpeng (Andy) Xu, Wendy Wu

指导教师：Guangyi Yue

论文题目：Second and Higher Gonalities of Erdős–Rényi Random Graphs

北京师范大学第二附属中学

参赛学生：胡怡博、郭佳豪

指导教师：保继光

论文题目：On maximum area of the polygons with given side lengths

获得物理铜奖的团队是：

上海市上海中学

参赛学生：苗辰飞

指导老师：许建丽、李向亭

论文题目：Study on the conductive property of flat sample with hole

中国人民大学附属中学

参赛学生：黄雨衡

指导老师：陈曦



论文题目: Investigation on the dynamics of friction induced reciprocation

上海市控江中学

参赛学生: 蒋安尧、余泓盈

指导老师: 吴群英、张海英

论文题目: Experiment study on motion mechanism of a straw placed in carbonated water

获得化学铜奖的团队是:

重庆市南开中学校

参赛学生: 刘丁菡

指导老师: 陈盛斌、李凌杰

论文: Fabrication and mechanism of reversible wettability (hydrophilic-oleophilic) sponge

华南师范大学附属中学国际部

参赛学生: 王泽宇

指导老师: 杜金志

论文: Preparation of Tumor Hypoxia Sensitive Nanomotors

南京外国语学校

参赛学生: 张海平、王心怡

指导老师: 许亮亮、全一武

论文: Synthesis and characterization of AIE-active chiral binaphthol derivatives for OLEDs with circularly polarized luminescence



获得生物铜奖的团队是：

北京师范大学第二附属中学国际部

参赛学生：郭炜航、李帛轩、周浩宇

指导老师：倪川、王宣

论文题目：Construction and characterization of a bio-detector for inflammatory bowel disease

湖南省长沙市第一中学

参赛学生：曾晨希

指导老师：高建军

论文题目：Study on a Novel Analgesic Peptide from the Digestive Juice of Land Leeches

获得计算机铜奖的团队是：

长春吉大附中实验学校

参赛学生：綦家淳

指导老师：李金华

论文题目：Table tennis recognition and positioning based on monocular vision and Faster-RCNN

上海市世界外国语中学

参赛学生：舒烨

指导老师：李建华、伍军

论文题目：Binary Reed-Solomon Coding Based Secure Distributed Storage Scheme and Test-Bed for Information-Centric Fog Networks

Kent School

参赛学生：廖培元

指导老师：Matthew Austin

论文题目：Deep Neural Network Based Subspace Learning of Robotic Manipulator Workspace Mapping



获得经济金融建模铜奖的团队是：

南京外国语学校

参赛学生：翟瑞杰、彭非

指导老师：王宇伟

论文题目：**How to Mitigate the Influence of Market Competition on Financing Constraints of Small and Medium-sized Enterprises**

长春吉大附中实验学校

参赛学生：周思远、崔津墀、吕相舟

指导老师：李金华

论文题目：**Ladder-pricing Eases National Day Holiday Highway Congestion——Mathematical Model Of Consumer Behavior Based On The Perspective Of Price Discrimination**

南京外国语学校

参赛学生：陶重年

指导老师：严青

论文题目：**A Study on Constructing Credit Card Fraud Detection Models**



2018 丘成桐中学科学奖银奖获奖名单

获得数学银奖的团队是：

广州市第六中学

参赛学生：李岳桐

指导教师：璩斌

论文题目：Equichordal Curves on Simply Connected Surfaces of Constant Curvature

获得物理银奖的团队是：

哈尔滨师范大学附属中学

参赛学生：李兆亿

指导老师：邓世强、姜永远

论文题目：The Winding Pendulum Phenomenon-A study on pendula with azimuthal-length constraint

获得化学银奖的团队是：

华南师范大学附属中学

参赛学生：姚沐垠

指导老师：朱芳

论文题目：In Vivo Tracing of The Effect of Microplastic Pollution on Salicylic Acids and Organophosphorus Pesticides Uptake in Aloe

获得生物银奖的团队是：

中国人民大学附属中学

参赛学生：王锦芸

指导老师：鞏伟峰、庄林岚

论文题目：A novel path employing luminescent bacteria as a light source to improve the growth of microalgae in biofilm-based cultivation



中国人民大学附属中学

参赛学生：李滢蔚、黄咏歆、王凤仪

指导老师：戴亚、王香明

论文题目：The reduction of *Caenorhabditis elegans* offspring's learning ability caused by ethanol stimulation and possible correlations with epigenetic modification of synaptic function-related genes

获得计算机银奖的团队是：

成都市华阳中学

参赛学生：卞思婉、孟盛、刘德华

指导老师：宋岷生

论文题目：Bicycle-sharing Smart Lock System

获得经济金融建模银奖的团队是：

武外英中

参赛学生：赵未来、龚星雨、张刘嘉

指导老师：Hu Xueying

论文题目：The Modeling of Water Resources in China



2018 丘成桐中学科学奖金奖获奖名单

获得数学金奖的团队是：

Deerfield Academy

参赛学生：Gerald Jiarong Xu

指导教师：Gu Xian Feng

论文题目：Group Theory and Megaminx

获得物理金奖的团队是：

南京市金陵中学

参赛学生：李知诚、康允博、田力

指导老师：张启军、丁洋

论文题目：The Study of Movement Models of Chinese Traditional Water Sleeves

获得化学金奖的团队是：

长春吉大附中实验学校

参赛学生：李英骥、陆明泽、黄子芮

指导老师：冯守华、李金华

论文题目：The abnormal shrinkage of water volume and the mechanism

获得生物金奖的团队是：

上海交通大学附属中学

参赛学生：詹林

指导老师：夏照帆、罗鹏飞

论文题目：Designed 3D scanning system to achieve the spatial uniformity of the optimal pressure value of pressure therapy



获得计算机金奖的团队是：

山东省实验中学

参赛学生：李东峰、李至瑞

指导老师：石磊

论文题目：SO₂ emission prediction of Huangtai power plant using variable selection and BP neural network

获得经济金融建模金奖的团队是：

华南师范大学附属中学国际部

参赛学生：吴世悠

指导老师：陈海兰

论文题目：The Role of Big Data in Smart Tourism: A Case Study of Understanding Museum Visiting Behavior

2018 丘成桐中学科学奖（科学金奖）获奖名单

获得科学金奖的团队是：

Deerfield Academy

参赛学生：Gerald Jiarong Xu

指导教师：Gu Xian Feng

论文题目：Group Theory and Megaminx