# The List of Winners to 2014 S.-T. Yau High School Mathematics Awards

## **Gold Award**

Title: On the Square-free Numbers in Shifted Primes

Members: Zerui Tan

**Instructor: Yongxing Cheng** 

School: The High School Attached to Hunan Normal University

#### Silver Awards

(1) Title: Analysis of the Number of Distinct Prime Factors of  $t(\alpha^n-\beta^n)$ 

Members: Jianqiao Xia, Yuxiang Jin, Mengzhe Zhang

Instructor: Siqing Cao

School: Zhengzhou Foreign Language School

(2) Title: Separating Mixed Signals in a Noisy Environment Using Global Optimization

Members: George Hou Instructor: Jack Xin

School: Arcadia High School, USA

### **Bronze Awards**

(1) Title: Study on the Properties of Circumscriebd Ellipses of Convex Quadrilaterals

Members: Yixi Shen Instructor: Zhongyuan Dai

School: No.2 Secondary School Attached to East China Normal University

(2) Title: Recognizing Zombie Fans in Microblog Based on Bayesian Theory

Members: Yiming Ding Instructor: Chengpeng Zhang

School: No.2 Secondary School Attached to East China Normal University

(3)Title: On generalizations of an inequality

Members: Ran Tao, Shuo Yu

Instructor: Xiang Lu

School: Tianjin Yaohua High School

(4)Title: Extremal Functions of Forbidden Multidimensional Matrices

Members: Peter Tian Instructor: Jesse Geneson

School: The Wellington School, USA

(5) Title: A Generalization of G-parking Functions and Related Algebras

Members: Brice Huang

Instructor: Wuttisak Trongsiriwat

# **Honorable Mention**

(1)Title: Study on the Relative periodicity and the Long-term behavior of Hypocycloid and

Quasicycloid

Members: Sicong Huang Instructor: Wenbing Xu

School: The High School Attached to Tsinghua University

(2)Title: The Diameter of (Directed) Graphs Members: Jiaqi Wang, Lide Cai, Daheng Min

Instructor: Xiangxue Jia

School: Beijing National Day School

(3) Title: New Probe into Combinatorial Identities

Members: Sheng Zhou Instructor: Peng Gui

School: The Affiliated High School of SCNU