Singapore Mathematical Project Festival 2019

Results

1. Junior Section

Gold Medal & Foo Kean Pew Memorial Prize.

School/Project Title Supervisor/Student(s)

NUS High School of Mathematics and Science
Kami

Chia Vui Leong
Shevonne Chia

Gold Medal & Excellent Presentation.

School/Project Title Supervisor/Student(s)

Methodist Girls' School

Seas the day – the bay way

Chan Foong Yee
Katharine Eleanor Chong Yong Min
Elise Sun Li Lyn
Jolene Soh En Yi

Claire Chan Kye Sun

Gold Medal.

School/Project Title Supervisor/Student(s)

Hwa Chong Institution
Bus route 123

Ooi Teong Lin
Liu Yixuan
Javier Chan Yan Kai
Pierre Yeap Yu Song
Chua Rui Hong

NUS High School of Mathematics and Science
The Sylver coige game

Chia Vui Leong
Daniel Ng Chun Kit
Dylon Wong Yee Kin

34 Mathematical Medley • Volume 45 No. 1 • August 2019

Silver Medal

School/Project Title Supervisor/Student(s)

NUS High School of Mathematics and Science
Playing around with dice

Chai Ming Huang
Chek Ze Chan
Lim Jin Tao

Hwa Chong Institution
Solid angles and trigonometry in space

Ang Lai Chiang
Tey Yi Fan
Tan Yan Zhong

Hwa Chong Institution
The math of 2048

Zong Lixing
Wong Kang Zheng
Gabriel Goh Hao Xiang
Ryan Wong Wern Jieh
See Jae Wey Tristan

Bronze Medal.

School/Project Title Supervisor/Student(s)

NUS High School of Mathematics and Science
Kaprekar's routine

Jiang Zewei Vivian
Jiang Yuzhe

NUS High School of Mathematics and Science
Flawless floors and seamless ceilingss

Elizabeth Liow
Tam Khai Ning Calista
Gan Tze Xin

Zhang Minyue

Nanyang Girls' High School
Josephus Problem

Jiang Zewei Vivian
Lin Zewei

Malcolm Sow Miao Geng
Toh Jing En Daniel

Zhenghua Secondary School
Winning probability in RISK

Ashar Ahmad
Ching ZongHan
Roh Seyoung
Yap Hwee Leng
Lim Shu Qi

Zhenghua Secondary School
Working town – Dhoby Ghaut rush

Kwek Co Hui
Ng Jia Qi
Lim Pei Jun Re
Kuan Yu Kin

Joshua Ang Teng Seng

Singapore Mathematical Project Festival 2019

Mathematical Medley • Volume 45 No. 1 • August 2019 35

Singapore Mathematical Project Festival 2019

Honourable Mention.

School/Project Title Supervisor/Student(s)

Hwa Chong Institution
House of math V2

Wang Qian
Tan Ler

Asher Ng
Calen Tang
Loh Chi Wen

Hwa Chong Institution
Polya's orchard problem

Chen Zenghui
Phua Jun Kai
Ryan Lim Hong Wei
Lee Chang Feng
Nigel Wang Wen Le

Paya Lebar Methodist Girls' School (Secondary) The doomsday clock

Kok Lai Fong
Amatatsu Yuko
Clarice Aydelynn Lee
Elizabeth Lim Qian En
Mandy Lim Ya Hui

Excellent Presentation.

School/Project Title Supervisor/Student(s)

Anderson Secondary School
A quantitative analysis of the MRT travel time Apps

Mohamed Aln H R
Neo Jia Qi
Jolie Lin Zhiyu
Tan Le Hao Jayden
Seah Wei Xiong
Yee Shao Qiang

36 Mathematical Medley • Volume 45 No. 1 • August 2019

Singapore Mathematical Project Festival 2019

2. Senior Section

Gold Medal & Foo Kean Pew Memorial Prize.

School/Project Title Supervisor/Student(s)

Hwa Chong Institution
The optimization of taxi services in Singapore through
data analysis

Ang Lai Chiang
Tin En Hao
Justin Tan Chern Lin
Yeoh Yong Jie

Gold Medal & Excellent Presentation.

School/Project Title Supervisor/Student(s)

NUS High School of Mathematics and Science
Regular matchstick graphs

Lee Chan Lye
Ho Li Xiong Timothy
Tan Kin Hern

Gold Medal.

School/Project Title Supervisor/Student(s)

NUS High School of Mathematics and Science
Partition function of a idealised liquid crystal

Chai Ming Huang
Alexander Goo Zong Han

Silver Medal with Excellent Presentation.

School/Project Title Supervisor/Student(s)

Anderson Secondary School
A simple approach to the tiling problem using
recursive sequence

Mohamed Aln H R
Le Viet Hung
Huang Keyi
Jin Qingyang
Tan Yiming

Silver Medal.

School/Project Title Supervisor/Student(s)

Hwa Chong Institution
Gridlock

Chen Zenghui
Benson Lin Zhan Li
Lee Qixiu Galen
Loh Yan Xun Timothy

NUS High School of Mathematics and Science Application of infinite series to definite integrals

Lee Tuo Yeong
Kim Yongbeom
Wong Swee Chong Dave
Wu Ling Bo

Mathematical Medley • Volume 45 No. 1 • August 2019 37

Singapore Mathematical Project Festival 2019

Bronze Medal with Excellent Presentation.

School/Project Title Supervisor/Student(s)

Catholic High School
Magic tricks based on number systems and error
correction code

Chng Xun Qi
Ng Kok Chen
Xu Xiuhua
Qi Leyan
Roderick Kong Zhang

Catholic High School
Tetris – efficient strategies to beat the game

Cai Wenchuan
Cham Zhi Xian Jos
Jerald Tham Jie Long
Yong Ee

NUS High School of Mathematics and Science
Parrondo's paradox

Chai Ming Huang
Li Yue Chen

Bronze Medal.

School/Project Title Supervisor/Student(s)

NUS High School of Mathematics and Science
Analysing plane curves by support functions

Jiang Zewei Vivian
Trivikram Mohan
Vishal Mohanty
Yen Jun Hung

Hwa Chong Institution
Budget travellers

Wang Qian
Stuart Lim Yi Xiong
Si Wen Xuan Terry
Chen Yiming
Loh Kai Kiat Keith

Anderson Secondary School
Robotic vacuum cleaner – a mathematical perspective

Mohamed Aln H R
Lei Lingkai
Luo Zhiyang
Li Boting
Yu Xiaoqiao

Honourable Mention with Excellent Presentation.

School/Project Title Supervisor/Student(s)

Hwa Chong Institution
The Josephus problem – game of death

Chen Zenghui
Choo Jun An Jerry
Low Wei Sheng
Ng Jia Quan

38 Mathematical Medley • Volume 45 No. 1 • August 2019

Singapore Mathematical Project Festival 2019

Honourable Mention.

School/Project Title Supervisor/Student(s)

Hwa Chong Institution
The lucky cat

Zong Lixing
Frizta Edius
Vi Setiawaty

Paya Lebar Methodist Girls' School (Secondary) Expansion of Finsler-Hadwiger theorem

Kok Lai Fong
Frizta Edius
Vi Setiawaty

Paya Lebar Methodist Girls' School (Secondary) Application of nine point circle theorem

Kok Lai Fong
Bianca Diva
Katri Arifin
Kezia Aprilia Sanjaya

Clementi Town Secondary School
Pizza cutting and many more

Zulhilmi Bin Zulki!ee
S Rishi
Run Xinghuan
Chua Boon Hsuan
Zhang Yunqi

Nanyang Girls' High School
Two-card golf games

Linda Chang
Kek Zhi Hui
Alicia Ng Yan Leng
Ling Yi

Xinmin Secondary School
Applying the mathematics of origami on developing compressible water tanks

Low Yan Jin

Ang Shi Jie
Au Wan Ching
Goh Joon Xiang
Tan Song Ze

Excellent Presentation.

School/Project Title Supervisor/Student(s)

Catholic High School
Application of Doppler effect

Cai Wenchuan
Clarence Emmanuel Chua Yong Chen
Emmanuel Sze Zong Han
Ong Yan Deng
Tan Yi Xuan

Catholic High School
Mathematics behind the XV puzzle
– enhancing the chances of scoring

Cai Wenchuan
Lee Su Kiat Sean

Ng Shu Kai Alden
Ng Xiang En Evan

Mathematical Medley • Volume 45 No. 1 • August 2019 39