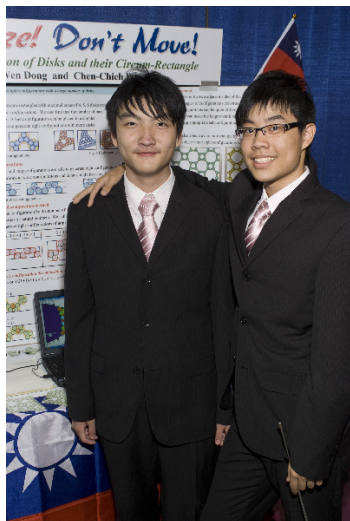


# CWSF 2010 - Peterborough, Ontario



## Herman Dong, Chen-Chieh Ping

### Squeeze! Don't Move! -Tight Configuration of Disks and their Circum-Rectangle

**Division:** International  
**Category:** Intermediate  
**Region:** Taiwan, R.O.C.  
**City:** Kaohsiung,  
**School:**

**Abstract:** In this project, we study the "tight configurations" for  $n$  disks of the same size in their circum-rectangles and find the biggest and smallest such rectangles when  $n \geq 6$ . We also find the smallest rectangle for arbitrary  $n$  of certain configurations and discover several methods for generating interesting tight configurations of any number of disks based on simple ones.

#### Biographies

Herman - I'm Herman Dong. I'm from Kaohsiung, Taiwan. I'm fourteen years old and my junior high school is affiliated with National Kaohsiung Normal University. Ever since I entered elementary school, I have been interested in Mathematics and Science. During my education, I've entered math contests, and won several awards. Also, I have joined science fairs in our countries. Besides my love of Math and Science, I have also a love of music. They say, music and science go hand in hand. A great example is Albert Einstein who played the violin. I can't play the violin, but I do play the drums. In my free time, I play badminton and table tennis.

Chen-Chieh - My name is Jeffrey Ping. I'm from Kaohsiung, Taiwan. I am 15 years old, studying in the Affiliated Junior High School of National Kaohsiung Normal University. In my free time I read books, listen to music. I especially like rock, and Linkin Park is my favorite band! Volleyball and Table Tennis are the sports I like. I can also do a few magic tricks and solve the Rubik's Cube. Since I was little, I have had a great interest in mathematics and science. After entering elementary school, I have joined some science fairs and won several prizes at science contests in my country. I am excited that I can have the chance to share our research in Canad...

#### Awards

#### Value

Gold Medal - International Sponsor: Youth Science Canada	
Total	\$0