



# International Young Physicists' Tournament Problems & Solutions 2012???2013

By Wang Sihui & Gao Wenli



**International Young Physicists' Tournament :Problems & Solutions  
2012???2013** By Wang Sihui & Gao Wenli

**Solutions to the 25th & 26th International Young Physicists' Tournament** provides original, quantitative solutions in fulfilling seemingly impossible tasks. The book expands on the solutions required by the problems. Many of the articles include modification, extension to existing models in references, or derivation and computation based on fundamental physics, and are not confined to the models and methods in present literatures.

The International Young Physicists' Tournament (IYPT) is one of the most prestigious international physics contests among high school students. This book is based on the solutions of 2012 and 2013 IYPT problems. The young authors provide quantitative solutions to practical problems in everyday life, such as the 2013 problem “Bouncing ball” that shows “how the nature of the collision changes if the ball contains liquid”, “Colored plastic” (2013 problem 6) and “Helmholtz carousel” (2013 problem 12) etc.

This book is intended as a college-level solutions guide to the challenging open-ended problems. It is a good reference book for undergraduates, advanced high-school students, physics educators and the curious public interested in the intriguing phenomenon encountered in daily life.

## Contents:

- 2012 Problem 1: Gaussian Cannon (*Qing Xia, Wenli Gao, Sihui Wang and Huijun Zhou*)
- 2012 Problem 3: String of Beads (*Tongyi Cao, Zheyuan Zhu, Wenli Gao and Sihui Wang*)
- 2012 Problem 5: Bright Waves (*Zheyuan Zhu, Kejing Zhu, Wenli Gao and Huijun Zhou*)
- 2012 Problem 6: Woodpecker Toy (*Zheyuan Zhu, Wenli Gao, Sihui Wang and Huijun Zhou*)
- 2012 Problem 8: Bubbles (*Kejing Zhu, Qing Xia, Sihui Wang and Huijun Zhou*)
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- 2012 Problem 13: Misty Glass (*Shan Huang, Xiao Li, Wenli Gao and Huijun Zhou*)
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- 2013 Problem 14: Flying Chimney (*Youtian Zhang, Zheyuan Zhu and Lan Chen*)
- 2013 Problem 16: Hoops (*Lan Chen, Bo Xiong, Sihui Wang and Wenli Gao*)
- 2013 Problem 17: Fire Hose (*Li Du, Sihui Wang and Wenli Gao*)
- 2013 Problem 3: Bouncing Ball (*Bo Xiong, Li Du, Sihui Wang and Wenli Gao*)

**Readership:** Science students, teachers, educators, pedagogists and people interested in science.

**Key Features:**

- The book provides original, quantitative solutions to complicated practical problems in everyday life, fulfilling seemingly impossible tasks
- Experimental demonstrations and numerical simulations make the high quality solutions accessible to the general public

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### **Editorial Review**

#### **From the Inside Flap**

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