

***Fun and Creative Problem Solving
in Mathematics and Computer Science***

Hon Wai Leong

School of Computing and USP
National University of Singapore
Email, MSN, FB: leonghw@comp.nus.edu.sg

(05 June 2010, Saturday, 12:30—3:30pm)

Experience the fun of problem solving

What I do and like to do...

Research:

Design and analysis of algorithms
[算法设计与分析]

Transportation Logistics

Computational Biology
[生物信息学]

Selected Hobbies:

Mentor / Develop Talents
[SMP, SRP, UROP, etc]

National Olympiad in Informatics
[新加坡信息学奥林匹克竞赛]

International Olympiad in
Informatics
[国际信息学奥林匹克竞赛]

Teaching:

Algorithms Design and Analysis

Discrete Mathematics

Graph Theory and Algorithms

Problem Solving in Computing

Invitation to Computer Science (USP)



[编程程序::极端应用软件::]

[24小时不间断编程大赛]

Career and Employability of IT Graduates

11 May 2008

I have come to Chong Hwa several times. (eg: 2008)


Leong Hon Wai

Soo Yuen Jien
(Chong Hwa 1989—94)



Fun and CPS in Math-CS

Overview of Workshop

- ❖ The Tourist Problem 
 - ◆ Hands-on Activity 1, 2, (may be 3)
- ❖ Zero Knowledge Proofs
 - ◆ Demo
- ❖ Creative Problem Solving
 - ◆ Hands-on Activity 4 and more...



Url: <http://www.comp.nus.edu.sg/~leonghw/Outreach/2010-06-KL/>

FIND SOMEONE WHO

lives outside
KL / PJ

came to workshop
by bus/LRT

has not written
a computer
program before

loves rainy
weather

has played
三国 before

Find two
non-computer
related hobbies
of YOUR
TEAM LEADER

plays a
musical
instrument

loves
mathematics

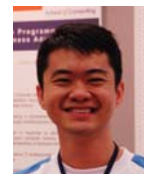
Hon Wai Leong, SoC, NUS

(CPS Workshop, KL) Page 5

Copyright © by Leong Hon Wai

Team Leaders:

<input type="checkbox"/> Cheh Carmen	Apple
<input type="checkbox"/> Goh Chun Lin	Acer
<input type="checkbox"/> Liew Ee Chan	Google
<input type="checkbox"/> Lim Boon Hwee, Matthew	Turing
<input type="checkbox"/> Liu Bin	Facebook
<input type="checkbox"/> Loh Bo Huai, Victor	Knuth
<input type="checkbox"/> Tan Boon Eng, Jonathan	Solaris
<input type="checkbox"/> Tan Teong Jin	Intel
<input type="checkbox"/> Tham Yong Xiang	MindStorm
<input type="checkbox"/> Wong MingRui	Adobe
<input type="checkbox"/> Yan Ke	Pentium
<input type="checkbox"/> Melvin Zhang	Randy



Hon Wai Leong, SoC, NUS

(CPS Workshop, KL) Page 6

Copyright © by Leong Hon Wai

Quote from a former student...

❑ Melvin Leok (1992)

- ❖ GEP Research Project, Sec. 2, Raffles Institution (RI)
- ❖ Research Project on “Graph Colouring” with me



Hon Wai Leong, SoC, NUS

(CPS Workshop, KL) Page 7

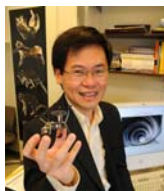
Copyright © by Leong Hon Wai

Quote from Prof. Melvin Leok

"In research, you will have to become comfortable dealing with things for which neither you, nor anyone else, know all the answers.

It is tempting to spend time over preparing by reading books and papers, but at the end, there is simply no substitute for jumping right in, and learning things and finding things out for yourself along the way.

Do not be afraid of making mistakes, it is an integral part of the discovery and learning process."



Dr. Melvin Leok (Jan 2010)

Associate Professor of Mathematics, University of California, San Diego

ACPS class of 1987, RI class of 1991, RJC class of 1993,
B.S., M.S., 2000, Caltech, Ph.D., 2004, Caltech.

Hon Wai Leong, SoC, NUS

(CPS Workshop, KL) Page 8

Copyright © by Leong Hon Wai

Quiz Question #1:

If in Prof Wong's gamble, we start with **45 red beans** and **90 green beans**, how will you bet?

Red or Green

Quiz Question #2:

Name *at least two* team leaders who are helping out in this workshop today.

Note: Other than *your* Team Leader.

Thank you!

*If you want to contact me,
go email, MSN, FB at leonghw@comp.nus.edu.sg*

