

Curriculum Vitae

Steven Halim

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PERSONAL PARTICULARS

Name : Dr Steven Halim
Religion : Christianity
Nationality : Indonesian
Place & date of Birth : Jakarta, Indonesia, 24 May 1982
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: <https://sites.google.com/site/stevenhalim>



SUMMARY

I am a computer scientist who likes to do both teaching and research.

University education and self-study in the field of Computer Science have nurtured me to be a person who knows a wide array of algorithms, excel in programming, and to be able to think out of the box. I also like to try new things and ponder on how to attack various computer science problems.

In the past, I have used my algorithmic knowledge to participate in several national/international programming contests. Now, as a lecturer, I want to pass my knowledge to the younger generations by teaching them algorithms in classes and via my competitive programming textbook.

RESEARCH and TEACHING

<http://www.comp.nus.edu.sg/~stevenha/myresearch>

<http://www.comp.nus.edu.sg/~stevenha/myteaching>

RECENT PUBLICATIONS

2013

- S. Halim, F. Halim. 2013. Competitive Programming: The New Lower Bound of Programming Contests. Lulu
- S. Halim, 2013. Expecting the Unexpected. Olympiad in Informatics 7:1-7, 2013 (to appear)

2012

- S. Halim, Z.C. Koh, V.B.H. Loh, F. Halim. 2012. Learning Algorithms with Unified and Interactive Visualization. Olympiad in Informatics 6:53-68, 2012

2011

- S. Halim, F. Halim. 2011. Competitive Programming 2: This Increases the Lower Bound of Programming Contests. Again. Lulu, <https://sites.google.com/site/stevenhalim/>

2010

- S. Halim, F. Halim. 2010. Competitive Programming: Increasing the Lower Bound of Programming Contests. Lulu
- S. Halim, F. Halim. 2010. Competitive Programming in National University of Singapore. In A New Learning Paradigm: Competition Supported By Technology: 173-206

PhD THESIS

Stochastic Local Search (SLS) algorithm is a simple and effective paradigm for solving a variety of NP-Hard Combinatorial (Optimization) Problem (COP). However, the performance of the SLS algorithm depends on the careful design and tuning to suit the COP at hand. For my PhD thesis, I propose the integrated white+black box approach for designing and tuning SLS algorithms. I have built a visualization tool to assist my investigation of SLS behavior on various COP instances. The details of this tool is: <http://www.comp.nus.edu.sg/~stevenha/viz>. I managed to obtain one successful result on Low Autocorrelation Binary Sequence problem using this approach and tool.

RESEARCH INTERESTS

Algorithm, Competitive Programming, Stochastic Local Search, Information Visualization, Human Computer Interaction, User Interface, Combinatorial Optimization, SLS Design and Tuning Problem

TEACHING APPOINTMENT AND AWARDS

I am a Lecturer in School of Computing, National University of Singapore since January 2009. I obtained **Teaching Excellence Award 2011-12** and **Best Teaching Assistant Award 2007-08** in Department of Computer Science, School of Computing, National University of Singapore.

RECENT TEACHING PERFORMANCE

Time	Module	Institution	Score	#Students
Jan-Apr 2013	CS3233 Competitive Programming	SoC, NUS	N/A	18
Jan-Apr 2013	IT1006 MATLAB Programming for Mathematics	SoC/Sci, NUS	N/A	71
Aug-Nov 2012	CS2010 Data Structures & Algorithms II	SoC, NUS	4.454 >80 th	140
Aug-Nov 2012	IT1005 Introduction to Programming with MATLAB	SoC/ChBe, NUS	4.201	280
Jan-Apr 2012	CS3233 Competitive Programming	SoC, NUS	4.778 >90 th	24
Jan-Apr 2012	IT1006 MATLAB Programming for Mathematics	SoC/Sci, NUS	4.274	89
Aug-Nov 2011	CS2010 Data Structures & Algorithms II	SoC, NUS	4.603 >90 th	106
Aug-Nov 2011	IT1005 Introduction to Programming with MATLAB	SoC/ChBe, NUS	4.297	314
Jan-Apr 2011	CS3233 Competitive Programming	SoC, NUS	4.200	17
Jan-Apr 2011	CS2020 Data Structures & Algorithms Accelerated	SoC, NUS	4.325	54

Notes:

1. Institution: SoC = School of Computing, ChBe = Department of Chemical and Biomolecular Engineering, Sci = Faculty of Science, NUS = National University of Singapore
2. Teaching Score in SoC, NUS ranges from [1.000 to 5.000] with teaching score 4.061, 4.143, 4.225, 4.349, and 4.522 being the 50th, 60th, 70th, 80th, and 90th percentile, respectively.

SELECTED TEACHING FEEDBACKS THAT REPRESENT MY TEACHING PHILOSOPHY

- The way he tries to incorporate **family values** into this module (CS2010) is also pretty interesting. I also like the way the storyline that links all the problem sets together.
- **Animations and visualization** helped students to get the concepts easily.
- Great **passion** and knows how to teach well
- Lots of **cool algorithms** flow from his mouth.
- Dr. Halim is an excellent, dedicated and very active (and interactive) teacher. He puts a lot of effort into making this module work so well. His constant feedback, timely consultation and **good course planning** make this module what it is. I think his **book, Competitive Programming 2**, deserves special mention. It is the best competitive programming-related resource I have ever had access to. His interaction with students is very down-to-earth and personal, and he takes great care to improve the "user experience" of his module.
- Very well versed in computing and works to **help the weaker students**.
- Proficient in knowledge on Computing; **Clear in his explanation** (often substantiated with a few examples); **Approachable, cheerful, friendly**
- He has proved to be more than a teacher and **mentor**. He had been a great teacher in imparting both CS knowledge as well as interesting moral insights. He even took the initiative to take a class photo during our last tutorial.

For more details, see: <http://www.comp.nus.edu.sg/~stevenha/myteaching/record.html>

BACKGROUND

EDUCATIONAL QUALIFICATIONS

2004-2010	PhD, National University of Singapore Thesis: "Designing and Tuning SLS via Integrated White+Black Box Approach" Supervisor: A/P Roland Yap Hock Chuan (SoC, NUS), A/P Lau Hoong Chuin (SIS, SMU)
2000-2004	Bachelor of Computing with Honours in Computer Science (2 nd Upper) National University of Singapore Cumulative Average Point: 4.19 out of 5.00

RECENT ACHIEVEMENTS

Sep 2012	Singapore IOI 2012 (Sirmione-Montichiari, Italy) team leader, 2 Silvers, 1 Bronze.
May 2012	NUS team coach for ACM ICPC World Finals, Warsaw, 14-18 May 2012, Honorable Mention.
Jul 2011	Singapore IOI 2011 (Pattaya, Thailand) team leader, 1 Gold, 1 Silver, 2 Bronzes.
Aug 2010	Singapore IOI 2010 (Waterloo, Canada) coach, 1 Gold, 1 Silver, 2 Bronzes.
Feb 2010	NUS team coach for ACM ICPC World Finals, Harbin Engineering University, 1-6 Feb 2010, Honorable Mention.
Oct 2009	NUS team coach for ACM ICPC regional contest, Prince of Songkla University, 3-4 Nov 2009, 2 nd and 10 th place.
Oct 2009	NUS team coach for ACM ICPC regional contest, Ateneo de Manila University, 22-23 Oct 2009, 3 rd place.

LANGUAGES

English (written + spoken)
Indonesian (written + spoken)

SOFTWARE SKILLS (Not exhaustive)

Productivity Tools : LaTeX, Microsoft Office 2007/XP (Word, Excel, PowerPoint)
Programming Tools : Microsoft Visual Studio 2008 (VC++, VC#), gcc, DevC++, javac
Image Editing : GIMP, Adobe Photoshop
Video Editing : Windows Movie Maker, Cyberlink Power Director, Camtasia Studio
Website Development : Frontpage, Macromedia Dreamweaver MX, Webservers (Apache/PHP)
Others : Game Development SDK (TV3D, OpenGL, DirectX)

PROGRAMMING LANGUAGES KNOWN (In decreasing order of familiarity)

C/C++/VC++; MATLAB, Java/JavaScript; Pascal; C#/VC#; VB