

Chinawat Isradisaikul

Curriculum Vitae

Personal Information

Chinawat (Chin) Isradisaikul
E-mail: chinawat.i@cmu.ac.th
Website: <https://chinawat.github.io/>

Department of Computer Engineering
Chiang Mai University
239 Huay Kaew Road
Tambon Suthep, Muang District
Chiang Mai 50200 THAILAND

Research Interests

Extensibility of compilers; programming language design and implementation; formal methods

Education

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|-------------|---|---|
| August 2017 | Cornell University | Ithaca, New York, United States |
| | Doctor of Philosophy, Computer Science | |
| | <i>Dissertation: Composable Compilers: Evolution toward a Practical Reality</i> | |
| May 2009 | University of Pennsylvania | Philadelphia, Pennsylvania, United States |
| | Bachelor of Science in Engineering, Summa Cum Laude | |
| | <i>Majors: Computer Science and Engineering, Mathematics</i> | |
| | Tau Beta Pi; Dean's List 2005–2006, 2006–2007, 2007–2008 | |
| June 2005 | Westtown School | Westtown, Pennsylvania, United States |
| | High School Diploma | |
| | Westtown Alumni Association Highest Scholarship Award | |
| | Charles K. Brown, III Award, for the highest average in mathematics | |
| March 2003 | Triam Udom Suksa School | Bangkok, Thailand |
| | High School Diploma | |
| | <i>Mathematics-science program, concentrated on computer study</i> | |

Awards and Honors

- PLDI Distinguished Paper Award: Reconciling exhaustive pattern matching with objects
The 34th ACM SIGPLAN conf. on Programming Language Design and Implementation June 2013
- Yahoo! Outstanding Graduate Student Teaching Award 2009–2010 May 2010
- Tau Beta Pi, Pennsylvania Delta Chapter, University of Pennsylvania April 2008
- Eta Kappa Nu, Lambda Chapter, University of Pennsylvania November 2007
- Selected for the University of Pennsylvania's 68th William Lowell Putnam Mathematical Competition
Team Fall 2007
- Royal Thai Scholarship from the Development and Promotion of Science and Technology Talents Project
(DPST), Royal Thai Government, Thailand, to study computer science through the doctoral degree in the
United States of America 2004–2014

Prepared on April 10, 2019.

- Finalist for the representatives of Thailand
International Olympiad in Informatics selection camp 2003 April 2003
- Gold medal and best solution
Thailand Olympiad in Informatics 2002 August 2002

Teaching Experience

- Spring 2019: Instructor Chiang Mai University, Chiang Mai, Thailand
261218: Algorithms for Computer Engineers
- Spring 2019: Instructor Chiang Mai University, Chiang Mai, Thailand
261497[2]: Competitive Programming (selected topics in computer software)
- Spring 2019: Instructor Chiang Mai University, Chiang Mai, Thailand
259201: Computer Programming for Engineers
- Fall 2018: Instructor Chiang Mai University, Chiang Mai, Thailand
261216: Discrete Mathematics for Computer Engineers
- Fall 2018: Instructor Chiang Mai University, Chiang Mai, Thailand
261200: Object-Oriented Programming
- Summer 2018: Instructor
Computer Class, DPST Academic Preparation Camp Kasetsart University, Nakhon Pathom, Thailand
- Spring 2017: Teaching Assistant (instructor rating: 4.86/5)
CS6110: Advanced Programming Languages Cornell University, Ithaca, NY
- Spring 2016: Teaching Assistant
CS4120: Introduction to Compilers Cornell University, Ithaca, NY
- Fall 2014: Teaching Assistant and Discussion Section Leader (instructor rating: 4.76/5)
CS2112: Object-Oriented Design and Data Structures – Honors Cornell University, Ithaca, NY
- Spring 2012: Teaching Assistant and Discussion Section Leader
CS2112: Object-Oriented Design and Data Structures – Honors Cornell University, Ithaca, NY
- Fall 2009–Spring 2010: Teaching Assistant and Discussion Section Leader
CS1112: Introduction to Computing using MATLAB Cornell University, Ithaca, NY
- Summer 2008: Instructor
SAT Mathematics Class, Thai Scholar Orientation Program 2008 Brewster Academy, Wolfeboro, NH
- Spring 2008: Teaching Assistant and Recitation Leader
CIS260: Mathematical Foundations of Computer Science University of Pennsylvania, Philadelphia, PA
- Fall 2007: Teaching Assistant and Recitation Leader (instructor rating: 3.69/4)
CIS121: Programming Languages and Techniques II University of Pennsylvania, Philadelphia, PA
- Summer 2007: Guest Instructor
Computer Class, Thai Scholar Orientation Program 2007 Brewster Academy, Wolfeboro, NH
- Spring 2007: Grader and Guest Recitation Leader
CSE121: Programming Languages and Techniques II University of Pennsylvania, Philadelphia, PA
- Summer 2002–03, 2005–06: Lecturer and Test Writer
Thailand Olympiad in Informatics preparatory session Triam Udom Suxsa School, Bangkok, Thailand

Publications and Articles

Peer-Reviewed Publications

- Chinawat Isradisaikul and Andrew C. Myers. 2015. Finding counterexamples from parsing conflicts. In *Proceedings of the 36th ACM SIGPLAN conference on Programming Language Design and Implementation (PLDI '15)*. ACM, New York, NY, USA, 555–564.

- Chinawat Isradisaikul and Andrew C. Myers. 2013. Reconciling exhaustive pattern matching with objects. In *Proceedings of the 34th ACM SIGPLAN conference on Programming Language Design and Implementation* (PLDI '13). ACM, New York, NY, USA, 343–354. **Distinguished Paper Award**

Tutorials

- Stephen Chong, Chinawat Isradisaikul, Andrew C. Myers, and Nathaniel Nystrom. 2014. Polyglot compiler tutorial. In the *35th ACM SIGPLAN conference on Programming Language Design and Implementation* (PLDI '14). Edinburgh, Scotland, UK.

Professional Activities

- External Review Committee
ACM SIGPLAN conference on Programming Language Design and Implementation (PLDI) 2018

Work Experience

- July 2018–present: Lecturer
Department of Computer Engineering
Chiang Mai University, Chiang Mai, Thailand
- February 2018–present: Academic Consultant
Graduate Developments Program, Development and Promotion of Science and Technology Talents Project
Institute for the Promotion of Teaching Science and Technology, Bangkok, Thailand

Computing Experience

Programming, Markup, and Database Languages

- Working set: Java, OCaml, C, Lua, Coq, HTML, CSS, PHP, JavaScript, MySQL, L^AT_EX
- Past languages: MATLAB, Python, Pascal, Verilog

Implementations

- Thai Scholar College Information System. <https://college.thaischolars.net/> April 2009–present
Web-based college application results of Thai Scholars from 2004 onward, exclusive to the Thai Scholar community. The system provides tools for generating necessary documents for the college application process specific to Thai Scholars.
- Quaker OAT Compiler from Object-Oriented, Type-Safe Programming Language to x86 Assembly, implemented in OCaml on Unix.
A compiler that translates an object-oriented programming language to x86 machine language, checking for type inconsistencies at compile time. The compiler supports allocations of processor registers.
Semester-Long Individual Project, CIS341: Compilers and Interpreters, Fall 2008
- Dual-Issue Superscalar Pipelined Processor, implemented in Verilog on an FPGA board.
A computer processor which starts executing two machine instructions per execution cycle. The processor processes an instruction in five stages so that up to five instructions can be in the stages during a cycle.
Final Group Project, CSE372: Digital System Organization and Design Lab, Spring 2007
- Operating System using Context Switching, implemented in C on Unix.
A simple operating system that treats itself as a process and its processes as contexts (threads of control). The system uses a file system resembling the FAT16 standard.
Final Group Project, CSE381: Operating Systems Lab, Fall 2006

- Command-Line Shell, implemented in C on Unix.
A program that processes basic operating-system commands such as creating, listing, and changing directories, executing processes in foreground and background, input and output redirections, and piping.
Midterm Individual Project, CSE381: Operating Systems Lab, Fall 2006

Networks

- Summer 2004–present: Webmaster and Administrator
Thai Scholars 47 Website <http://ts47.thaischolars.net/>
- Spring 2011–present: Webmaster and Administrator
Thai Scholars Portal <http://www.thaischolars.net/>
- Winter 2005–14: IT Specialist and Liaison
Thai Scholar Christmas Program, Stony Point Center, Stony Point, NY

Volunteer Activities

- December 2012–present: Trained SKYWARN Spotter for Tompkins County
National Weather Service, Binghamton, NY
- Winter 2005–14: College Application Advisor and Reviewer
Thai Scholar Christmas Program, Stony Point Center, Stony Point, NY
- Summer 2006–10: Teaching Assistant and Residence Hall Advisor
Thai Scholar Orientation Program, Brewster Academy, Wolfeboro, NH
- Summer 2005–06, 2008–09: Photographer and Leaflet Designer
Public Relations Department, Triam Udom Suksa School, Bangkok, Thailand

Languages

- Thai — Native language
- English — Fluent