

# Gao Zhiyuan

Seoul National University  
Computer Science and Engineering  
National Cheng Kung University

Email: [d44041910@mail.ncku.edu.tw](mailto:d44041910@mail.ncku.edu.tw)  
Github: <https://github.com/alapha23/>

## Projects

### *A Weighted Round Robin Scheduler in Multicore System*

Tested on Samsung Artik10 as default scheduler for kthread and swap in replace of Completely Fair Scheduler.  
Implement load balancing between 8 cores.

### *Rotation based Read-write Lock for ARTIK10*

A read-write lock based on rotation information from device.  
Synchronize with spinlock and conditional variables.  
Manage waiting list with linux circular list.

### *SnuPL/1 Compiler*

SnuPL1 consists of scanner, parser, semantics checker, code generation and support composite data type arrays.  
Implemented in C++ the compiler will compile SnuPL/1 source code into 32-bit Intel assembly code.

### *SNU Source Code Plagiarism Detector*

Extract Abstract Syntax Tree(Ast) from gcc for C programs.  
Apply Tree Edit Distance algorithm to compare distance between two Asts.  
Visualize plagiarism result with Graphviz and Neo4j

### *Geo-tagged Filesystem based on ext2*

A geo-tagged ext2 filesystem that records location information in each file at creation or modification.  
Access is granted only when location information of the specific file is close to device gps information.

## Activities

Speaker at OpenSUSE Asia Summit 2017  
Proficient in English(TOEFL 100) and Japanese(JLPT N1)