# COLIN CLEVELAND

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## EDUCATION

**National Taiwan University (NTU)**                                    Sep. 2014 - present
B.S. in Computer Science and Information Engineering - Overall GPA: 3.63/4.3 (83%)
Minor in Economics and Mathematics

**Research Interest**: Algorithmic Game Theory, Graph Theory, andNetwork Security

## HONORS & AWARDS

2018 Taipei City Lion Club Germ Scholarship
2017 National Science Council Undergraduate Student Research Grant
2014 National Taiwan University Hope Scholarship

## RESEARCH EXPERIENCE

**Research on Algorithmic Game Theory (Prof. Ho-Lin Chen)**        National Taiwan University
Paper Surveying and Discussion                                      Jun. 2018 - present
• Reviewed papers of EC18 (the 19th ACM conference on Economics and Computation) and WINE 2018
(The 14th Conference on Web and Internet Economics).
• Analysed time complexity of algorithms that find equilibria in Multi-Preference Stable Marriage Problems
with high preference/agent ratio.

**Lab of Algorithmic Research (Prof. Hsueh-I Lu)**                 National Taiwan University
Minimum Cut of Directed Planar Graphs                                 Feb 2018  Aug. 2018
• Reviewed previous minimum cut algorithms and their proofs.
• Combined old algorithms to create new ones, and analysed the complexity of the new algorithms.

**Network Security Lab (Prof. Hsu-Chun Hsiao)**                    National Taiwan University
The Vulnerabilities of OAuth in IoT devices                           Feb. 2016  Feb. 2018
• Analysed the OAuth standard, and reviewed previous works.
• Tested real world OAuth implementation by Facebook and Google.
• Modelled IoT devices in different situations, and discussed the possibility of threats.

## RELEVANT COURSES (*IN PROGRESS)

| | |
|---|---|
| **Algorithm** | Data Structures and Algorithms, Algorithm Design and Analysis, |
| | Formal Languages and Automata Theory, Design Strategies for Computer Algorithms |
| | Mathematical Analysis of Algorithms: Number Theory, Generating Functions, |
| | Asymptotic Theory |
| **Economics** | Economics (I) (II), Microeconomics (I) (II), Macroeconomics (I) (II), |
| | Topics in Neuroeconomics, Statistics and Econometrics with Recitation (I) (II) |
| **Mathematics** | Linear Algebra, Calculus (I)(II), Discrete Mathematics, Introduction to |
| | Cryptography, Applied Algebra (Abstract Algebra), Game Theory* |
| | Analysis (Honour Program) (I): Basic Topology, Differential Calculus, Integral, |
| | Measure Theory |
| | Probability (I)(II*): Measure Theory, Law of Large Number, Central Limit Theorem, |
| | Martingale |

## WORK EXPERIENCE

**Centre for Teaching and Learning Development**     National Taiwan University, Taiwan
Students Tutor                                                  Oct. 2017 - Jun. 2018
- Worked as Programming and Economics tutor.
- Helped to build the old exams solutions website.

**Graduate Institute of Networking and Multimedia (INM)**     National Taiwan University, Taiwan
Part-time worker                                                  Nov. 2015 - present
- Worked as the webmaster of the INM web page.
- Repaired the computers and network in the INM office when they broke down.

## SKILLS

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|---|---|
| **Programming** | C/C++, Java, Python |
| **Math/Stats Softwar** | R, Stata |
| **Web** | Flask with Python, JavaScript |
| **Language** | Mandarin Chinese (native), Taiwanese (native), English (IELTS:7(overall)) |
| **Test Score** | GRE (Q/V/AWA): (167/151/3.0) |