Tamer Abdelaziz Abdelmegid Mohamed Yasssen

National University of Singapore   Email: tamer@comp.nus.edu.sg
School of Computing   Handphone: +65 8756 1597

Education

National University of Singapore, Singapore.
Ph.D. Student, August 2018 to present.
Expected date of completion: 31/08/2023.
Major: Computer Science, School of Computing.

Helwan University, Egypt
M.Sc., Computer Science, July 2018.
Degree: Excellent with honor degree, **GPA**: 3.56 / 4 .
M.Sc. Thesis entitled "Enhancing Design of Extensibility in Software Applications Using Interactive Design Pattern Recommendation".

Masaryk University, Czech Republic.
Short-term exchange study and research, July 2017.
Fields: Multidisciplinary studies at Faculty of Informatics.
Degree: Excellent with honor degree, **GPA**: 1 / 1 .
Ranks among the best 9 percent of students as regards the reached average.

Helwan University, Egypt
B.Sc., Computer Science, May 2013.
Degree: Excellent with honor degree, **GPA**: 3.69 / 4 .
B.Sc. Thesis entitled "Bio-metric Security System Using Iris Recognition".

Research Interests

My interests include research in software engineering, and I am working on building automated approaches to analyzing vulnerabilities in smart contracts using deep learning techniques.

Research Experience

Research Projects
—1. Smart contract vulnerability detection using deep learning.
—2. Machine learning vs. static analysis techniques to detect software security issues.
—3. Verified compiler for a Multi-Language software.
—4. Identification and assessment of software design pattern violations.
—5. Software aging and software design decay.
—6. Interactive design pattern recommendation.
—7. Bio-metric security technique for social networks.

Teaching Experience	**Assistant Lecturer at Computer Science Dept., Helwan University** From April 2014 to July 2018, I have taught many computer science courses including *introduction to computers, C++ programming language, object oriented programming using Java, design patterns, data structures, software engineering, scrum , automation testing* and many others. I have extensive knowledge of tools such as C, C++, Java, Python, SQL, Machine learning techniques and other academic tools used for teaching and instructing purposes.
Publications	Tamer Abdelaziz, Sedky Adly, A., Rossi, B., and M Mostafa, M. S. **"Identification and Assessment of Software Design Pattern Violations"**. FCIH Informatics Bulletin, V. 1, Issue 2, April 2019 `https://fcihib.journals.ekb.eg/article_107517_62d89752f7d871844b0e5dd1601da4f5.pdf` Tamer Abdelaziz and Aquinas Hobor. **"Smart Learning to Find Dumb Contracts"**. To appear at 32nd USENIX Security Symposium (USENIX Security 23) (2023). Tamer Abdelaziz and Aquinas Hobor. **"Schooling to Exploit Foolish Contracts"**. To appear at the fifth International Conference on Blockchain Computing and Applications (BCCA2023) (2023).
Awards	—**2nd place**, graduate student 2015/2016, Computer Science Dept., Helwan University, Egypt. —**3rd place**, undergraduate student 2012/2013, Computer Science Dept., Helwan University, Egypt.
Fellowships	**Singapore International Graduate Award (SINGA)** Singapore, August 2018-2022. Funded by National Universtiy of Singapore **Erasmus+ programme, Masaryk University Scholarship** Brno, Czech Republic, February 2017 to July 2017. Funded by European Commission
Skills	Strong mathematical and algorithmic CS background. Excellent programming skills in C/C++, Java and Python, plus the various scripting languages.
Languages	English (Excellent), Arabic (Native).

References   **PhD supervisors**:

Professor KHOO Siau Cheng,
Computer Science Dept., National University of Singapore, Singapore.
Email: khoosc@comp.nus.edu.sg

Professor Aquinas Adam Hobor,
Computer Science Dept., National University of Singapore, Singapore.
Email: hobor@comp.nus.edu.sg

M.Sc supervisor: Professor Mostafa-Sami M. Mostafa,
Computer Science Dept., Helwan University, Egypt.
Email: mostafa.sami@fci.helwan.edu.eg

Short-term exchange study supervisor: Professor Bruno Rossi,
Computer Systems and Communications, Masaryk University, Czech Republic.
Email: brossi@mail.muni.cz

Web page   `https://www.comp.nus.edu.sg/~tamer/`