

# Pargorn Puttapirat

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## Education

### Degree Program

- 2019 - present • D.Eng (Computer Science and Technology), Xi'an Jiaotong University<sup>1</sup>
- 2017 - 2019 • M.Eng (Electronic and Information Engineering), Xi'an Jiaotong University<sup>2</sup>
- 2013 - 2017 • B.Eng (Biomedical Engineering), Srinakharinwirot University

### Non-Degree Programs

- 2014 • **Exchange Student** at Juniata College, USA to study Liberal Arts  
(Scholarship funded by Srinakharinwirot University)

## Internships

- 2016 • University of Fukui and Srinakharinwirot University Internship Program 2016, Japan  
(Scholarship funded by the Faculty of Engineering, Srinakharinwirot University)
  - Computer vision laboratory
- 2015 • Internship at Sodexo Healthcare Support Service (Thailand) in Samitivej Srinakharin Hospital
  - Medical equipment department

## Research Interests

Medical and general image processing, histopathological image analysis, genotype-phenotype association, cancer biology, application of artificial intelligence, and computer vision

## Projects

**'OpenHI'** (2018 - present) OpenHI is Open Histopathological Image. It is a web-based framework that allows precise, semantically meaningful, online, and collaborative annotation of large-scale histology images in whole slide format. See more at <https://gitlab.com/BioAI/OpenHI/>

**'Malaria Finder'** - (2015 - 2016) Specialized application developed for researcher in anti-malarial drug development for drug susceptibility test. Contribution in erythrocytes segmentation algorithm which be able to segment abnormal erythrocytes such as touching and highly overlapping erythrocytes.

**'Navigation Guidance System for Visually Impaired People'** - (Early 2016) Working prototype to scan the area in front of the individual and project realtime stream of information on their back via vibrant array, controlled by micro-computer.

## Language Skills

- Native **Thai**
- Fluent **English** [108/120 TOEFL iBT]

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<sup>1</sup> Funded by Chinese Scholarship Council (CSC)

<sup>2</sup> Funded by The Information Technology Foundation under the Initiative of Her Royal Highness Princess Maha Chakri Sirindhorn

## Skills

Programming Languages      **Python, MATLAB**, Swift, C++, Javascript

Libraries & Framework      Jupyter Notebook, OpenCV, Sci-kit Image, Flask, Git, Raspberry Pi Interfacing

## Publications

**Puttapirat, P.**, Zhang, H., Deng, J., Dong, Y., Shi, J., Lou, P., ... Li, C. (2019). OpenHI: Open platform for histopathological image annotation. *International Journal of Data Mining and Bioinformatics*, 22(4), 328–349. <https://doi.org/10.1504/IJDMB.2019.101393>

**Puttapirat, P.**, Zhang, H., Lian, Y., Wang, C., Zhang, X., Yao, L., & Li, C. (2018). OpenHI - An open source framework for annotating histopathological image. In *2018 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)* (pp. 1076–1082). Madrid, Spain: IEEE. <https://doi.org/10.1109/BIBM.2018.8621393>

Li, K., Zhang, D., Raza, F., Zhang, Z., **Puttapirat, P.**, Liu, Y., & Zhang, Y. (2018). Multi-contact switch using double-dressing regularity of probe, fluorescence, and six-wave mixing in a Rydberg atom. *The Journal of Chemical Physics*, 149(7), 074310. <https://doi.org/10.1063/1.5034066>

Li, K., **Puttapirat, P.**, Liu, Y., Jiang, W., Imran, A., Lysa Marlyne, M.-K., ... Zhang, Y. (2018). Phase controlled six-wave mixing parametrical amplification to yield correlated light beams. *Laser Physics*, 28(7), 075403. <https://doi.org/10.1088/1555-6611/aabec4>

Wang, R., **Puttapirat, P.**, Raza, F., Ahmed, I., Wang, H., & Zhang, Y. (2018). Hybrid correlation and squeezing with spontaneously generated coherence effect. *Laser Physics Letters*, 15(8), 085401. <https://doi.org/10.1088/1612-202X/aac861>

Tang, H., Ahmed, I., **Puttapirat, P.**, Wu, T., Lan, Y., Zhang, Y., & Li, E. (2018). Investigation of multi-bunching by generating multi-order fluorescence of NV center in diamond. *Physical Chemistry Chemical Physics*, 20(8). <https://doi.org/10.1039/c7cp08005k>

**Puttapirat, P.**, & Charoenpong, T. (2017). Hand posture estimation from 2D image sequence by hand landmark identification. In *2017 9th International Conference on Knowledge and Smart Technology: Crunching Information of Everything, KST 2017*. <https://doi.org/10.1109/KST.2017.7886088>

**Puttapirat, P.**, Phothisonothai, M., & Tantisatirapong, S. (2016). Automated segmentation of erythrocytes from Giemsa-stained thin blood films. In *2016 8th International Conference on Knowledge and Smart Technology, KST 2016*. <https://doi.org/10.1109/KST.2016.7440503>

## Awards

2018    TCCLS<sup>1</sup> Student Travel Awards

2018    Xi'an Jiaotong University Third prize for the study in academic year 2017-2018

## Online Courses

2018    Introduction to the Biology of Cancer, Johns Hopkins University through Coursera

2015    The Data Scientist's Toolbox, Johns Hopkins Bloomberg School of Public Health through Coursera

2015    Image and video processing, Duke University through Coursera

2015    Learning How to Learn, US San Diego through Coursera

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<sup>1</sup> Technical Committee on Computational Life Sciences

## Hobbies

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## References

### Professor Chen Li, PhD

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### Wongwit Senavongse, PhD

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### Assoc. Prof. Theekapun Charoenpong, PhD

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Biomedical Engineering Department Lecturer, Srinakharinwirot University

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### Assit. Prof. Suchada Tantisatirapong, PhD

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