Pargorn Puttapirat

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Education

Degree program

2017 - 2019	• M.Eng (Computer Science and Technology), Xi'an Jiaotong University[1]
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 image processing, digital pathology, histopathology, genotype-phenotype association, cancer biology, applications of artificial intelligence

Coding profile

GitHub: github.com/marchputt | GitLab: gitlab.com/pargorn

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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[1] Funded by The Information Technology Foundation
under the Initiative of Her Royal Highness Princess Maha Chakri Sirindhorn

Programming skills

Programming Languages	**Python**, **MATLAB**, Swift, C++, Javascript
Libraries & Framework	OpenCV, Sci-kit Image/Learn, Flask, OpenSlide, Git, Raspberry Pi Interfacing

Publications

Gao, Z., **Puttapirat, P.**, Shi, J., & Li, C. (2020). Renal Cell Carcinoma Detection and Subtyping with Minimal Point-Based Annotation in Whole-Slide Images. In A. L. Martel, P. Abolmaesumi, D. Stoyanov, D. Mateus, M. A. Zuluaga, S. K. Zhou, D. Racoceanu, & L. Joskowicz (Eds.), Medical Image Computing and Computer Assisted Intervention – MICCAI 2020 (pp. 439–448). Springer International Publishing.

Dong, Y., **Puttapirat, P.**, Deng, J., Zhang, X., & Li, C. (2020). LibMI: An Open Source Library for Efficient Histopathological Image Processing. Journal of Pathology Informatics, 11, 26. https://doi.org/10.4103/jpi.jpi_11_20

Puttapirat, P., Li, C., Zhang, H., Deng, J., Dong, Y., Shi, J., He, H., Gao, Z., Wang, C., & Zhang, X. (2019). OpenHI2—Open source histopathological image platform. 2019 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2696–2701. https://doi.org/10.1109/BIBM47256.2019.8983322

Wang, C., Yang, Z., Wang, K., **Puttapirat, P.**, Li, C., & Zhang, G. (2019). Comparing digital histology slides with multiple staining based on decoloring and dyeing technique. 2019 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2709–2714. https://doi.org/10.1109/BIBM47256.2019.8982953

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., **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

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

Patents

李辰，董裕欣，Pargorn Puttapirat，邓静怡: 一种特大图像的存储与读写方法 (Method for storing and reading and writing extra large image). 2019

李辰，Pargorn Puttapirat，张海川: 基于云端的大型病理学图像协作注释方法及系统 (Method and system for collaborative annotation of large-scale pathology images based on cloud). 2019

Awards

2018   TCCLS 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

Hobbies

References

Professor Chen Li, PhD

Department of Computer Science and Technology, Xi'an Jiaotong University

Tel: (+86) 15802902730

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Professor Chen Li is my academic advisor and he is currently supervising my master's degree project at Xi'an Jiaotong University.

Wongwit Senavongse, PhD

Biomedical Engineering Department Director, Srinakharinwirot University

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Dr. Wongwit Senavongse is my academic advisor in bachelor degree and head of Biomedical Engineering Department, Faculty of Engineering, Srinakharinwirot University. He also supervise my extracurricular activities throughout my time at SWU.

Assoc. Prof. Theekapun Charoenpong, PhD

Biomedical Engineering Department Lecturer, Srinakharinwirot University

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Associate Professor Theekapun Charoenpong is my senior project supervisor in bachelor degree during my 4th year of study (2016 - 2017) in Biomedical Engineering Department.

Asst. Prof. Suchada Tantisatirapong, PhD

Biomedical Engineering Department Lecturer, Srinakharinwirot University

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Assistant Professor Suchada Tantisatirapong is my project supervisor during in bachelor degree my 3rd year of study (2015 - 2016) in the Biomedical Engineering Department.