

DR. YUAN REN LOKE

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- Making classes optimally designed to meet the diverse needs of students
- Making students participate actively and seek assistance readily
- Expanding my research experience by collaboration
- Sharing knowledge and research work with students and colleagues

EDUCATION

PhD	Electrical Engineering, National University of Singapore	2013
BEng	Electrical Engineering (2 nd Upper), National University of Singapore	2005

PROFESSIONAL EXPERIENCE

Lecturer Nanyang Technological University 2018/08-Present
○ Part-time Programme Coordinator

Instructor National University of Singapore 2018/01-2018/07

Teaching

Assistant National University of Singapore 2012/02-2018/07
○ Conducting lectures, tutorials and experiments
○ Contributing to the development of course materials and assessments
○ Final year project Supervisor
○ Actively involve in several outreach programs for secondary schools, high schools, junior colleges

Research

Engineer National University of Singapore 2010-2011
○ Designed a software program to enhance facial image with super-resolution through data-driven technique
○ Developed an processing algorithm to detect changes in facial expression

RESEARCH EXPERIENCE

On-going Projects:

- **Text Spotting and Translation in the Wild**
 - Developing a real-time mobile application to translate text in the wild from one language to another
- **Software Development for Understanding Financial Report and Table Detection**

- Algorithm development for understand financial document via machine learning approaches

Past Projects:

- **Development of Vision Based Collision Avoidance System for UAV**
Singapore Polytechnic, 2015 - 2018
 - Developed a UAV position controller
 - Developed algorithm for detecting target objects via computer vision approach
- **Software Development for Computer Vision Guided X-Y-Z-Theta Table**
Venture Corporation Limited, 2017
 - Photo stitching algorithm development
 - Project supervision and technical support
- **Software Development for TCR Angle Closure Imaging**
Singapore Eye Research Institute, Jun 2006 – Aug 2006 and Jun 2009 – Aug 2009
 - Developed MATLAB GUI for end-users
 - Developed algorithms of the edge detection and the curve fitting for TCR Angle Closure Imaging
- **Tracking Vehicles and Pedestrian for Video Surveillance System**
Institute for Infocomm Research (I²R), Jul 2004 – Jun 2005
 - Developed a particle filtering algorithm to track objects such as vehicles and pedestrians for a video surveillance system
 - Developed a GUI for the multiple video sequences for tracking vehicles and pedestrians
- **Detection and Classification of Biomedical Cell Specimens**
National University of Singapore, Jul 2004 – Jun 2005
 - Developed a GUI program to control microscope platform using Visual C++ and MFC
 - Developed algorithms for image segmentation and edge detection for pollen counting

TEACHING EXPERIENCE

NTU:

- CZ1007 Data Structure
- CZ3004 Multi-disciplinary Design Project
- CE1005 Digital Logic
- CE2003 Digital System Design
- CE3003 Microcontroller Programming

NUS:

- EE2020 Digital Fundamentals
- EE3032 Innovation & Enterprise II
- EE2024 Programming for Computer Interfaces
- EE2031 Circuits and Systems Design Lab

PUBLICATIONS

Y.R. Loke, P. Tan, A. Kassim, “Face Hallucination on Personal Photo Albums”, *In Proceedings of the ACCV 2012 Workshops on Face Analysis: The Intersection of Computer Vision and Human Perception*, 2012: pp 284-295 (Oral Presentation)

Y.R Loke, S. Ranganath, “Image Inpainting With a Learned Guidance Vector Field”, *In Proceedings of the Seventh International Conference on Information, Communications & Signal Processing*, 2009: pp 57-61 (Oral Presentation)

Y.R. Loke, S. Ranganath, “Batch Algorithm with Additional Shape Constraints for Non-Rigid Factorization”, *In Proceedings of the 18th British Machine Vision Conference*, 2007, pp 980-989 (Poster Presentation)

Y.R Loke, P. Kumar, S. Ranganath, W. Huang, “Object Matching Across Multiple Non-overlapping Fields of View Using Fuzzy Logic”, *In Proceedings of the First International Workshop on Sensor Networks and Applications*, 2005, pp 65-70 (Oral Presentation)

Y.R Loke, P. Kumar, S. Ranganath, W. Huang, “Object Matching Across Multiple Non-overlapping Fields of View Using Fuzzy Logic”, *ACTA Automatica Sinica*, 32(6): pp 978-987, 2006

PROFESSIONAL SERVICE

IEEE Member

Pattern Recognition and Machine Intelligence Association Committee Board Member

The 4th International Conference on Computer Systems and Communication Technology (ICCSCT 2020)

The 4th international Conference on Intelligent Computing and Signal Processing (ICSP 2019)

The 4th international Symposium on Advances in Electrical, Electronics and Computer Engineering (ISAEECE 2019)

COMPUTER SKILLS

C/C++, MATLAB, Java, Python, Assembly Language, Verilog, VHDL

OpenCV, ROS (Robot Operating System), gnuradio

HONORS AND AWARDS

Scholarship of National University of Singapore (2005 –2009)

2005-2009

REFERENCES

Prof. Ashraf Ali Bin Mohamed Kassim

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