


Curriculum Vitae for XMUM Official Website

	Name	Chua Ming Yam
	Current Position	Assistant Professor
	Administrative Position (if applicable)	
	Room No.	
	Programme	Electrical and Electronics Engineering
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BIOGRAPHY

Ir Dr Chua Ming Yam is an Assistant Professor in the School of Electrical Engineering and Artificial Intelligence under Department of Electrical and Electronics Engineering, Xiamen University (Malaysia). His research interests are in radar and sensing, having accomplished various Synthetic Aperture Radar system development and flight missions in Malaysia, Japan, and Indonesia. He pioneered breakthroughs in radar research in the region by applying FPGA-based components in radar development projects. Among the many research grants he received, he had been awarded FRGS grant by MoHE in 2020. Apart from his work in the academic field, he had previously delivered numerous consultancy projects to government departments and MNCs in the country, as well as R&D agencies in other countries. In addition to his numerous publications in international peer-reviewed journals, he has been regularly invited to speak as a keynote speaker, chair international conferences, and contribute as a reviewer for publications submitted to IEEE and MDPI. From his research work, he had filed 3 patents and had 2 patents granted. Dr Chua received his B. Eng, M. Eng. Sc., and Ph.D. from Multimedia University in 2003, 2007, and 2016 respectively, and subsequently completed his Post-Doctoral Research Fellowship in Chiba University, Japan in 2018.

RESEARCH INTERESTS

Synthetic Aperture Radar (SAR), Human Sensing, Field Programmable Gate Array (FPGA)

EDUCATIONAL BACKGROUND

- Ph.D. (Engineering), Multimedia University, Malaysia (2016)
- M.Eng.Sc. (Engineering), Multimedia University, Malaysia (2007)
- B.Eng. (hons) (Electronics), Multimedia University, Malaysia (2003)

WORKING EXPERIENCE

- Assistant Professor, School of Electrical Engineering and Artificial Intelligence, Xiamen University, Malaysia (2022 – present)
- Senior Lecturer, Faculty of Engineering and Technology, Multimedia University, Malaysia (2012 – 2022)
- Postdoctoral Research Fellow, Center for Environmental Remote Sensing, Chiba University, Japan (2016 – 2018)

- Technical Manager, iRadar Sdn. Bhd., Malaysia (2012 – 2016)
- Lecturer, Faculty of Engineering and Technology, Multimedia University, Malaysia (2009 – 2012)

RESEARCH EXPERIENCE / GRANTS

- LAPAN (National Institute of Aeronautics and Space for the Republic of Indonesia) training for “Field Programmable Gate Array (FPGA) for Synthetic Aperture Radar (SAR), Principal Trainer, USD 15,000, 2021
- LAPAN (National Institute of Aeronautics and Space for the Republic of Indonesia) consultancy project for Synthetic Aperture Radar consultancy project (Upgrading job of LAPAN Synthetic Aperture Radar (SAR) lab-scale prototype to SAR system for low altitude flight mission), Principal Consultant, USD 55,000, 2021
- MMU IR Fund for “Vehicle Detection on Aerial Images using Convolutional Neural Network”, Project Member, RM 7,779.00, Apr 2021 – Mar 2022
- FRGS MoHE funding for “Investigation of Millimeter Wave Scattering Mechanism for Human Postures and Gaits Sensing”, Project Leader, RM 78,200.00, Nov 2020 – Oct 2022
- FRGS MoHE funding for “Radiation Aware Energy-Efficient Resource Allocation for Ultra-Dense 5G Mobile Networks”, Project Member, FRGS/1/2020/ICT09/MMU/02/1, RM 123,300.00, Nov 2020 – Oct 2023
- LAPAN (National Institute of Aeronautics and Space for the Republic of Indonesia) consultancy project for Synthetic Aperture Radar consultancy project (Lab-scale SAR system design and development, SAR training), Principal Consultant, ~USD 40,000, 2020
- MMU R&D CAPEX funding for “Human Postures and Kinetics Identification using Machine Learning with Single Polarization Millimeter Wave Radar”, Project Leader, RM 20,000, 2019
- Post-doctoral Fellowship by Global Prominent Research Programme, Chiba University, Japan; attached to Center for Remote Sensing, Chiba University, Japan, 1 Oct 2016 – 30 Sept 2018 (23 months), JPY 12,000,000
- TM R&D funding for “Millimeter-Wave Massive MIMO Channel Sounding Estimation and Beamforming for 5G (mmWave)”, Project Member, RDTC/160901, RM 334,950, Jan 2016 – Jul 2018
- MOHE grant for “Development of a Ground-based Interferometry Synthetic Aperture Radar System for Land Deformation”, Project Member, RM 423,000, 2014
- TM R&D funding for “Development of Precision Agriculture Monitoring System using Microwave Imaging Sensor (Agrosys)”, Project Member, RDTC/120815, RM 293, 820, Oct 2012 – May 2014
- MOSTI eScience funding for “High Speed Embedded Image Processor for Synthetic Aperture Radar (SAR)”, Project Member, RM 228,900.00, 2012 – 2014
- MOHE grant for “Development of a Ground-based Interferometry Synthetic Aperture Radar System for Land Deformation”, Project Member, RM 473,000, 2013
- ARSM consultancy project for “Enhancement of The Prototype Synthetic Aperture Radar-Unmanned Aerial Vehicle (SAR-UAV) System for Multipurpose Remote Sensing Application”, Principal Researcher, RM 500,000.00, 2012 - 2013

- TM R&D funding for “Ultra-Wide Bandwidth Signal Synthesizer for Advanced Radar Applications”, Corresponding Project Leader, RM 200,160.00, 2012 – 2013
- JICA & JST SASTREPS “Research and Development for Reducing Geo-hazard Damage in Malaysia Caused by Landslide and Flood”, Project Member, RM 300,000.00, 2012
- ARSM consultancy project for “Enhancement of C-band Synthetic Aperture Radar”, Principal Researcher, RM 1,440,540.00, 2009 – 2010

REPRESENTATIVE PUBLICATIONS

Patent

- “Reconfigurable Real-Time Synthetic Aperture Radar Signal Generator and Method of Providing the Same”, Malaysia Patent, Filed on 28 Nov 2012, PI 2012701038, Granted on 26 July 2021.
- “Multi-band Reconfigurable Subsurface Radar Profiler System”, Malaysia Patent, Filed on 04 Dec 2014, PI 2014703638.
- “Multi-band reconfigurable subsurface radar profiler system”, Taiwan Patent, Filed on 16 Apr 2015, Granted on 11 Jun 2019 for period of 11 Jun 2019 – 15 Apr 2035.

Peer-reviewed Journal Article

- J. T. Sri Sumantyo, M. Y. Chua, C. E. Santosa, G. F. Panggabean, T. Watanabe, B. Setiadi, F. D. Sri Sumantyo, K. Tsushima, K. Sasmita, A. Mardiyanto, E. Supartono, E. T. Rahardjo, G. Wibisono, M. A. Marfai, R. H. Jatmiko, Sudaryatno, T. H. Purwanto, B. S. Widartono, M. Kamal, D. Perissin, S. Gao, and K. Ito, “Airborne Circularly Polarized Synthetic Aperture Radar”, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, pp. 1676 – 1692, 15 December 2020. (Scopus & WoS, Q1)
- Yaqi Ji, Josaphat Tetuko Sri Sumantyo, Ming Yam Chua, Mirza Muhammad Waqar, “Unsupervised PolSAR Image Classification based on Sparse Representation”, International Journal of Remote Sensing, 21 Mar 2019. (Scopus & WoS, Q1)
- M. Y. Chua, J. T. Sri Sumantyo, C. E. Santosa, G. F. Panggabean, K. Sasmita, F. D. Sri Sumantyo, T. Watanabe, Y. Q. Ji, P. P. Sitompul, M. Nasucha, F. Kurniawan, B. Purbantoro, A. Awaludin, E. T. Rahardjo, G. Wibisono, R. H. Jatmiko, Sudaryatno, T. H. Purwanto, B. S. Widartono, and M. Kamal, “The Maiden Flight of Hinotori-C: The First C Band Full Polarimetric Circularly Polarized Synthetic Aperture Radar in the World”, IEEE Aerospace and Electronic Systems Magazine, Vol. 34, Issue 2, p.p. 24 – 35, 2019. (Scopus & WoS, Q2)
- Cahya Edi Santosa, Josaphat Tetuko Sri Sumantyo, Chua Ming Yam, Katia Urata, Koichi Ito, Steven Gao, “Subarray Design for C-Band Circularly-Polarized Synthetic Aperture Radar Antenna Onboard Airborne”, Progress in Electromagnetics Research, Vol. 163, pp. 107-117, 2018. (Scopus & WoS, Q2)
- Yaqi Ji, Josaphat Tetuko Sri Sumantyo, Ming Yam Chua, Mirza Muhammad Waqar, “Earthquake/Tsunami Damage Assessment for Urban Areas Using Post-Event PolSAR Data”, Remote Sensing, 10(7), 8 July 2018. (Scopus & WoS, Q1)
- Yaqi Ji, Josaphat Tetuko Sri Sumantyo, Ming Yam Chua, Mirza Muhammad Waqar, “Earthquake/Tsunami Damage Level Mapping of Urban Areas Using Full Polarimetric SAR

Data”, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, Vol. 11, No. 7, pp. 2296 – 2309, 19 April 2018. (Scopus & WoS, Q1)

- Cahya Edi Santosa, Josaphat Tetuko Sri Sumantyo, Katia Urata, Ming Yam Chua, Koichi Ito, Steven Gao, “Development of a Low Profile Wide-Bandwidth Circularly Polarized Microstrip Antenna for C-Band Airborne CP-SAR Sensor”, Progress In Electromagnetics Research C, Vol. 81, pp. 77 - 88, 2018. (Scopus, Q3)
- P. Razi, J. T. S. Sumantyo, D. Perissin, H. Kuze, M. Y. Chua, G. F. Panggabean, “3D Land Mapping and Land Deformation Monitoring Using Persistent Scatterer Interferometry (PSI) ALOS PALSAR: Validated by Geodetic GPS and UAV”, IEEE Access, Vol. 6, pp. 12395 – 12404, 12 February 2018. (Scopus & WoS, Q1)
- Ming Yam Chua, Voon Chet Koo, Heng Siong Lim, Josaphat Tetuko Sri Sumantyo, “Phase Coded Stepped Frequency Linear Frequency Modulated Waveform Synthesis Technique for Low Altitude Ultra Wideband Synthetic Aperture Radar”, IEEE Access, Vol. 5, pp. 11391 - 11403, 2017. (Scopus & WoS, Q1)
- V. C. Koo, Y. K. Chan, V. Gobi, M. Y. Chua, C. H. Lim, C. S. Lim, C. C. Thum, T. S. Lim, et al., “A New Unmanned Aerial Vehicle Synthetic Aperture Radar for Environmental Monitoring”, Progress in Electromagnetics Research, PIER 122, 245, 268, 2012. (Scopus & WoS, Q1)
- Y. K. Chan, V. C. Koo, C. Y. Ang, K. S. Yee, M. Y. Chua, “Design and Development of A C-band RF Transceiver for UAVSAR”, Progress in Electromagnetics Research C, Vol. 24, 1-12, 2011. (Scopus & WoS, Q1)
- M. Y. Chua, V. C. Koo, “FPGA-based Chirp Generator for High Resolution UAVSAR”, Progress in Electromagnetics Research, PIER 99, 71-88, 2009. (Scopus & WoS, Q1)
- Y. K. Chan, M. Y. Chua, V. C. Koo, “Sidelobes Reduction using Simple Two and Tri-Stages Non Linear Frequency Modulation (NLFM)”, Progress in Electromagnetics Research, PIER 98, 33-52, 2009. (Scopus & WoS, Q1)

HONORS/AWARDS

- Professional Engineer (Electronics), Board of Engineers, Malaysia (BEM) (2016 – present)
- Corporate Member of Institution of Engineers, Malaysia (IEM) (2015 – present)
- HRDF Certified Trainer (TTT/11447), Human Resource Development Fund (2014 – present)
- Certified LabVIEW Associate Developer (CLAD), National Instruments (2013 – 2015)
- Best Paper Award, The Indonesian Japan Joint Scientific Symposium (IJSS2016) (2016)
- Best PhD Thesis (Engineering) Award, Multimedia University Convocation (2016)
- Best Paper Award, IEEE Workshop on Geoscience & Remote Sensing (2014)