

CURRICULUM VITAE

TS. DR. ADAM TAN BIN MOHD AMIN

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Education

- Ph.D in Electrical, Electronics & Systems Engineering, Universiti Kebangsaan Malaysia, UKM (2022)
- M.Sc in Intelligent Systems, King's College London, UK (2009)
- B.Eng (Hons) in Biomedical Engineering, Imperial College London, UK (2008)

Areas of Interest

- Medical Imaging
- Signal Processing
- Rehabilitation Robotics

Professional Membership & Learned Society

- Graduate Engineer, Board of Engineers Malaysia (BEM)
- Professional Technologist, Malaysia Board of Technologist (MBOT)
- Member, Institute of Electrical and Electronics Engineers (IEEE)
- Penceramah Bertauliah Negeri Selangor, Jabatan Agama Islam Selangor (JAIS)

Appointments

Position	Duration
1. Senior Lecturer, Department of Computer and Communication Systems Engineering, Faculty of Engineering, Universiti Putra Malaysia	Present
2. Teacher, Cambridge A-Levels Physics, Kolej Yayasan UEM	2023 – 2025
3. Lecturer, Cambridge A-Levels Physics, Kolej MARA Seremban	2020
4. Research Assistant, Faculty of Engineering, Universiti Kebangsaan Malaysia	2015 – 2016
5. Lecturer, Faculty of Mechanical Engineering, Universiti Teknologi MARA Shah Alam	2010 – 2015

Publications

1. **Amin, A.T.M.**, Mokri, S.S., Ahmad, R., Ismail, F. and Abd Rahni, A.A., 2021. Evaluation Methodology for Respiratory Signal Extraction from Clinical Cone-Beam CT (CBCT) using Data-Driven Methods. *International Journal of Integrated Engineering*, 13(5), pp.1-8.
2. **Amin, A.M.**, Mokri, S.S., Ahmad, R. and Abd Rahni, A.A., 2020, March. Comparison of data-driven respiratory signal extraction methods from cone-beam CT (CBCT). In *Journal of Physics: Conference Series* (Vol. 1497, No. 1, p. 012004). IOP Publishing.
3. **Amin, A.T.M.**, Mokri, S.S., Ahmad, R. and Abd Rahni, A.A., 2019. Development of a 4D digital phantom for Cone-Beam CT (CBCT) imaging on the Varian On-Board Imager (OBI). *International Journal of Integrated Engineering*, 11(3).
4. **Amin, A.M.** and Abd Rahni, A.A., 2017, May. Modelling the Siemens SOMATOM sensation 64 multi-slice CT (MSCT) scanner. In *Journal of Physics: Conference Series* (Vol. 851, No. 1, p. 012012). IOP Publishing.

5. Ariffin, I.M., Rasidi, A.I.H.M., Yussof, H., Mohamed, Z., Miskam, M.A., **Amin, A.T.M.** and Omar, A.R., 2015. Sensor based mobile navigation using humanoid robot Nao. *Procedia Computer Science*, 76, pp.474-479.
6. Rahim, A.H.A., Lachmann, A., Low, C.Y. and **Amin, A.T.M.**, 2015. SMA actuated finger exoskeleton device for rehabilitation of acute paresis patient. *Applied Mechanics and Materials*, 773, pp.883-887.
7. **Amin, A.T.M.**, Ab Rahim, A.H. and Low, C.Y., 2014. Adaptive controller algorithm for 2-DOF humanoid robot arm. *Procedia Technology*, 15, pp.765-774.
8. Mahadhir, K.A., Tan, S.C., Low, C.Y., Dumitrescu, R., **Amin, A.T.M.** and Jaffar, A., 2014. Terrain classification for track-driven agricultural robots. *Procedia Technology*, 15, pp.775-782.
9. Rahim, A.H.A., Bin Ab Patar, M.N.A., **Amin, A.T.M.** and Mahmud, J., 2013. The development of finger rehabilitation device for stroke patients. *Applied Mechanics and Materials*, 393, pp.604-610.

Conference Proceedings / Academic Talks

1. **Amin, A.M.**, Mokri, S.S., Ahmad, R., Ismail, F. and Rahni, A.A., 2022, November. Analysis of Inter-Fraction Respiratory Variability Effect on Data-Driven Respiratory Signal Estimation Methods from CBCT Imaging. In *2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)* (pp. 1-3). IEEE.
2. **Amin, A.M.**, Mokri, S.S., Ahmad, R. and Rahni, A.A., 2022, November. Evaluation of Complimentary Rebinning Reconstruction for Off-Center Flat Panel Detector CBCT Imaging. In *2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)* (pp. 1-3). IEEE.
3. **Amin, A.M.**, Mokri, S.S., Ahmad, R. and Rahni, A.A., 2021, October. Evaluation of Data Driven Respiratory Signal Extraction Methods from Cone-Beam CT using MR-based Digital Phantoms. In *2021 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)* (pp. 1-3). IEEE.
4. **Amin, A.T.M.**, Mokri, S.S., Ahmad, R., Ismail, F. and Abd Rahni, A.A., 2021, March. Comparison of Data-Driven Respiratory Signal Extraction Methods From Cone-Beam CT (CBCT)—a Preliminary Clinical Study. In *2020 IEEE-EMBS Conference on Biomedical Engineering and Sciences (IECBES)* (pp. 236-240). IEEE.
5. **Amin, A.T.M.**, Mokri, S.S., Ahmad, R. and Abd Rahni, A.A., 2018, December. Development of a 4D phantom for respiratory motion modeling during Cone-Beam CT (CBCT) imaging on the Varian On-Board Imager (OBI). In *2018 IEEE-EMBS Conference on Biomedical Engineering and Sciences (IECBES)* (pp. 451-456). IEEE.
6. **Amin, A.T.M.**, Abd Rahni, A.A., Mokri, S.S. and Ahmad, R., 2018, July. Comparison Between Projection Weighting and Rebinning Approaches in Analytical Image Reconstruction in Off-Center Flat Panel Cone-Beam CT Imaging. In *2018 2nd International Conference on BioSignal Analysis, Processing and Systems (ICBAPS)* (pp. 33-36). IEEE.
7. **Amin, A.T.M.**, Abd Rahni, A.A., Mokri, S.S. and Ahmad, R., 2017, September. Modeling the Varian On-Board Imager (OBI): Cone-beam CT (CBCT) operating modes. In *2017 IEEE International Conference on Signal and Image Processing Applications (ICSIPA)* (pp. 117-122). IEEE.
8. Fikri, M.A., Abdullah, S.C. and **Tan, M.A.**, 2014, November. Evaluation of hand direction for stroke patient based on 3R under-actuated robot manipulator. In *2014 International Symposium on Micro-NanoMechatronics and Human Science (MHS)* (pp. 1-6). IEEE.

Patents (if any)

Research Grants

Grant Title	Role	Year	Source of Fund	Amount (RM)
1. Simultaneous Particle Swarm Optimization (PSO) Predictive Human Gait Locomotion Multiple Characterization	Principal Researcher	2013 – 2016	ERGS	55,000
2. Behavioral Self-Optimization Using Distributed Cognitive-Reflective-Motoric Loops for Hierarchical Mechatronic Systems	Co-Researcher	2011 – 2013	ERGS	58,000
3. A New Architecture Based on Cognitive-Reflective-Motor Loops for Self-Optimizing Mechatronic Function Modules	Co-Researcher	2010 – 2012	FRGS	84,000
4. Modeling and Performance Characterization of a New Dynamic Ankle Foot Orthosis	Co-Researcher	2010 – 2013	FRGS	46,400

Community or Industry Projects/Grants

Professional Services / Consultation (Journal Reviewer, editorial works, etc.)

Teaching Experience

Course Name	Level of study	Year	Number of students
1. Physics	A-Levels	2023-2025	60
2. Foundations in Engineering	Degree	2010	80
3. Numerical Methods with Applications	Degree	2010 – 2015	200
4. Electronics & Microprocessors	Degree	2013 – 2015	400
5. Control Engineering	Degree	2012 – 2014	200