



Sharing Session: Starting My Career in the Engineering Profession

Presented by:

Prof. Madya Ir. Dr. Lai Khin Wee

(BEM Malaysia Most Prominent Young Engineering Leader 2022)

PROF. MADYA IR. TS. DR. LAI KHIN WEE



- Academic Qualification
 - ❖ BEng. (Biomedical) UTM, 2009
 - ❖ PhD.(Biomedical) TU Ilmenau Germany and UTM, 2012
- Professional Registration
 - ❖ Chartered Engineer, UK Engineering Council
 - ❖ Chartered Professional Engineer, NER Engineer Australia
 - ❖ ASEAN Chartered Professional Engineer
 - ❖ APEC Engineer, IntPE (Australia)
 - ❖ Professional Engineer (Ir.) with Practicing Certificate, Malaysia
 - ❖ Professional Technologist (Ts.), MBOT Malaysia
 - ❖ Young Scientist Network – Academy Sciences Malaysia
 - ❖ Young Affiliate – The World Academy of Sciences (TWAS)
- Fellowship
 - ❖ Fellow, Institute of Engineers Malaysia (FIEM)
 - ❖ Fellow, Engineer Australia (FIEAust)
 - ❖ Fellow, CEO@Faculty 2.0, Ministry of Higher Education Malaysia
 - ❖ ACU Fellowship, United Kingdom



Outline of Presentation

About me – Career Path, Awards and Achievements

Project Highlights

CSR

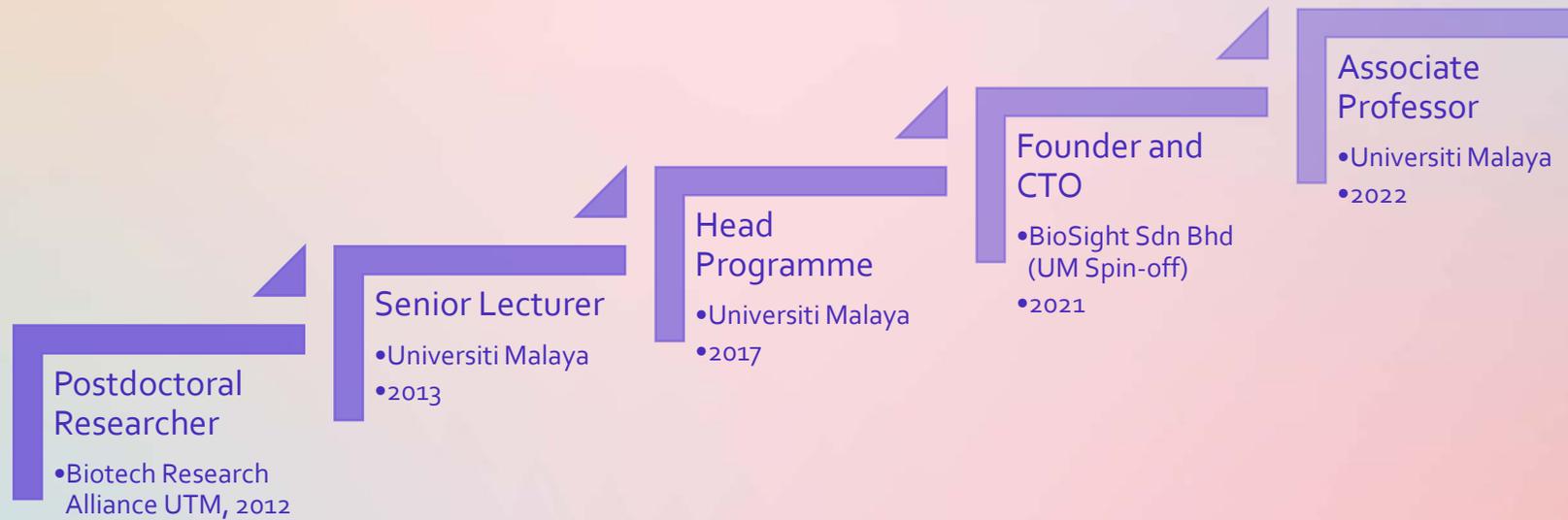


SPECIAL AWARD AND CONFERMENT





CAREER PATH





Research achievements

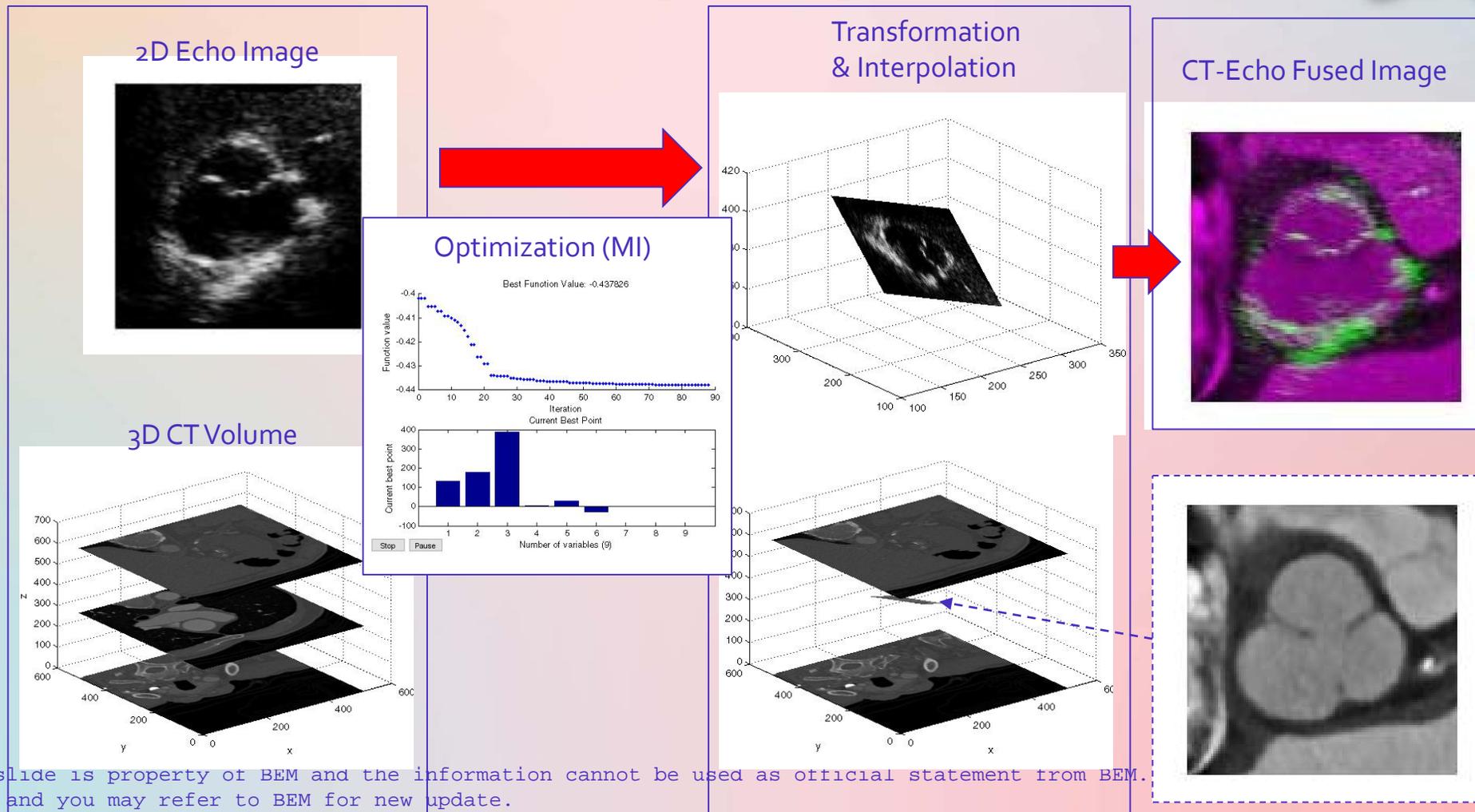
Supervised 48 PhD and Master students

Principle Investigator for > 30 projects (~ MYR 2 millions)

15 patents filed, 2 Granted, and 2 undergoing licensing to BioSight Sdn Bhd.

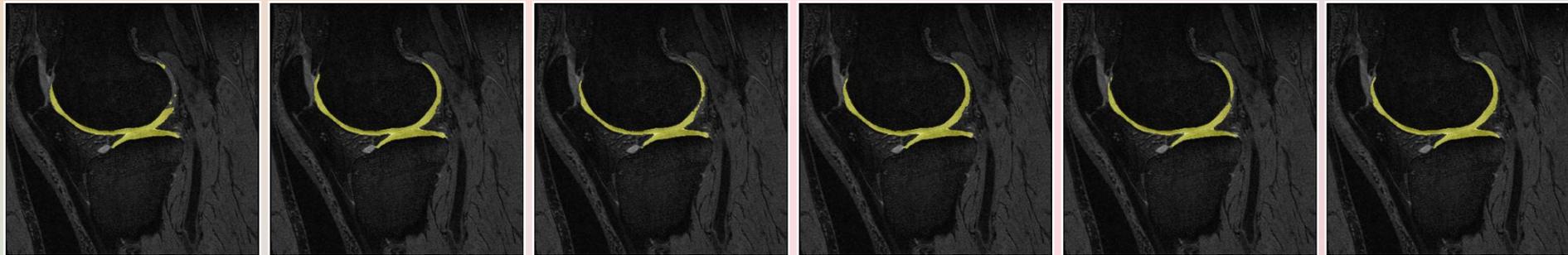
Recipient of more than 30 Gold and Special Awards from the expo organized in Malaysia, Taiwan, Singapore and Brunei

Cardiovascular Research with Insitut Jantung Negara





Osteoarthritis Research with UMMC



GT	4	4	4	4	0	0	1	1
PR	3	3	4	4	1	1	0	0

Predictions performed by Ordinal Regression Module approach.
 Remarks: GT – Ground Truth; PR – Predicted grades

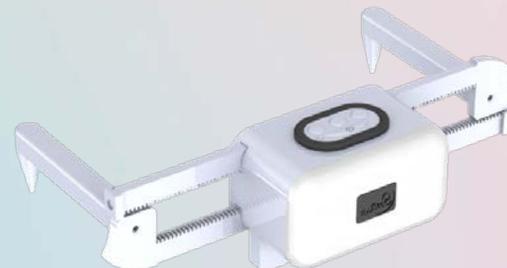
Scoliosis Research with UMMC



Scoliosis

Body brace

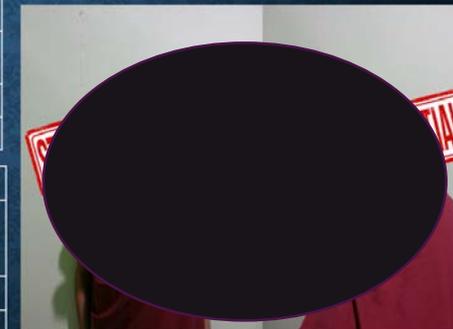
Spine fusion Surgery



CLINICAL TRIALS^[1]

Methods (R+ve/L-ve)	Standing			
	Shoulder Angle	Time(s)	Shoulder Height	Time(s)
Baseline Scolliometer	R 4.0	47.0	14.0	50
Scoltech	R 4.6	10	5.3	10

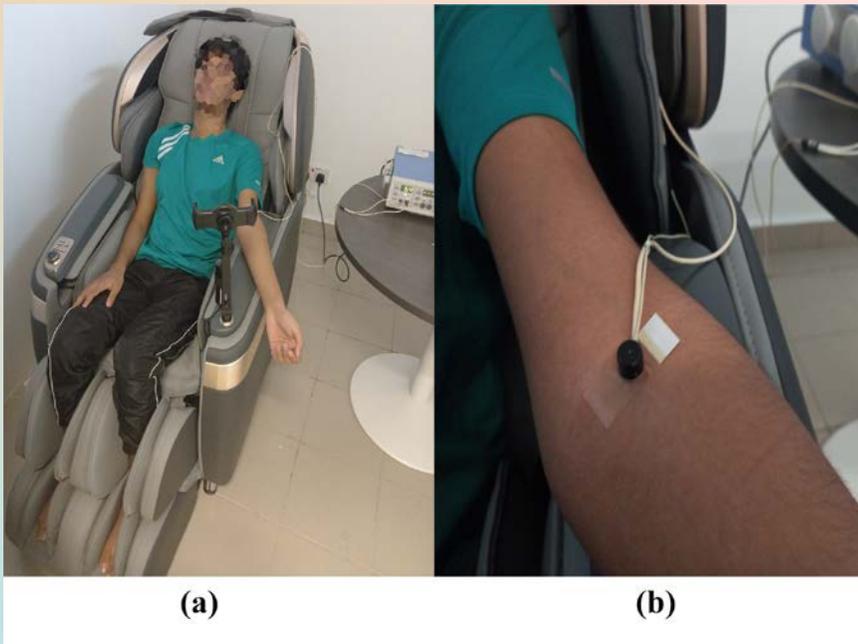
Methods (R+ve/L-ve)	Forward Bending			
	Scolliometer Thoracic	Time(s)	Thoracic Hump Height	Time(s)
ATR Scolliometer	R 16	15	R 14.0	30
Scoltech	R 15	5	R 20.0	15



[1] Conducted at UMMC by surgeons after receiving approval from Medical Research Ethics Committee. MREC ID NO: 2017323-5082

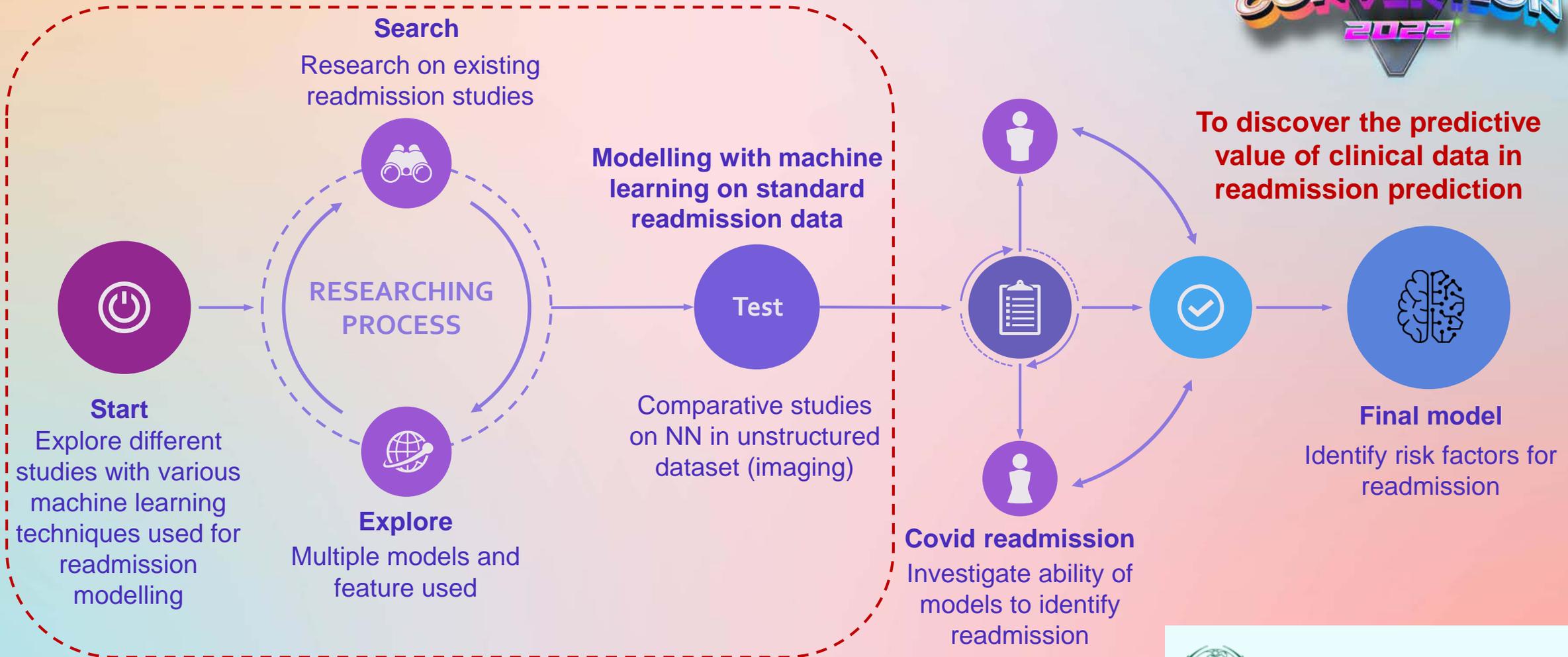
Industrial project with Ogawa Malaysia

INVESTIGATING MASSAGE EFFECTS ON SKIN
TISSUE PERFUSION AND SLEEP QUALITY

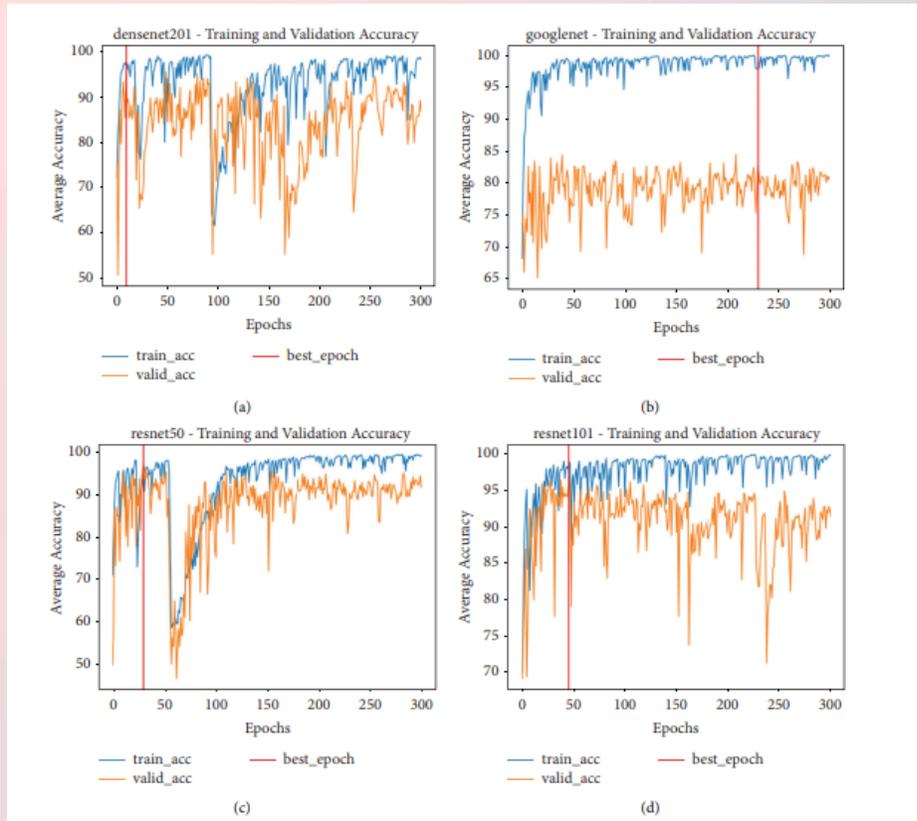
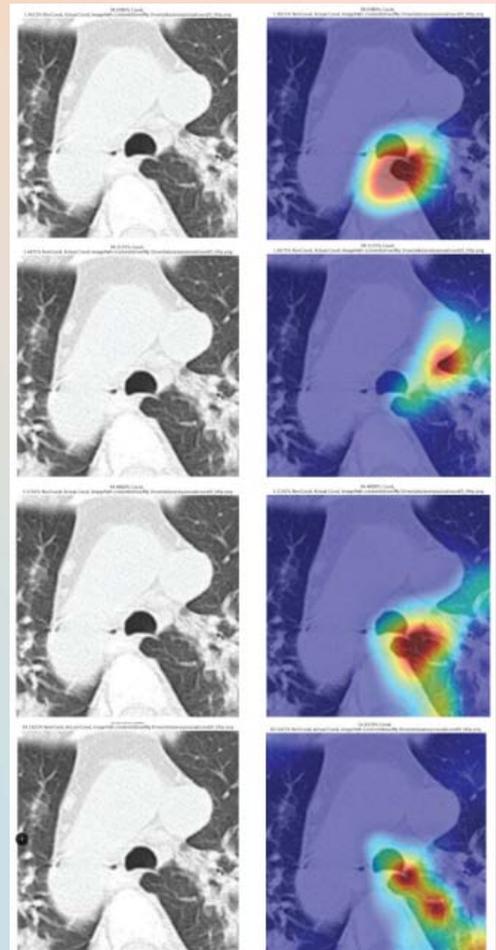




COVID19 research with APT EBC-China

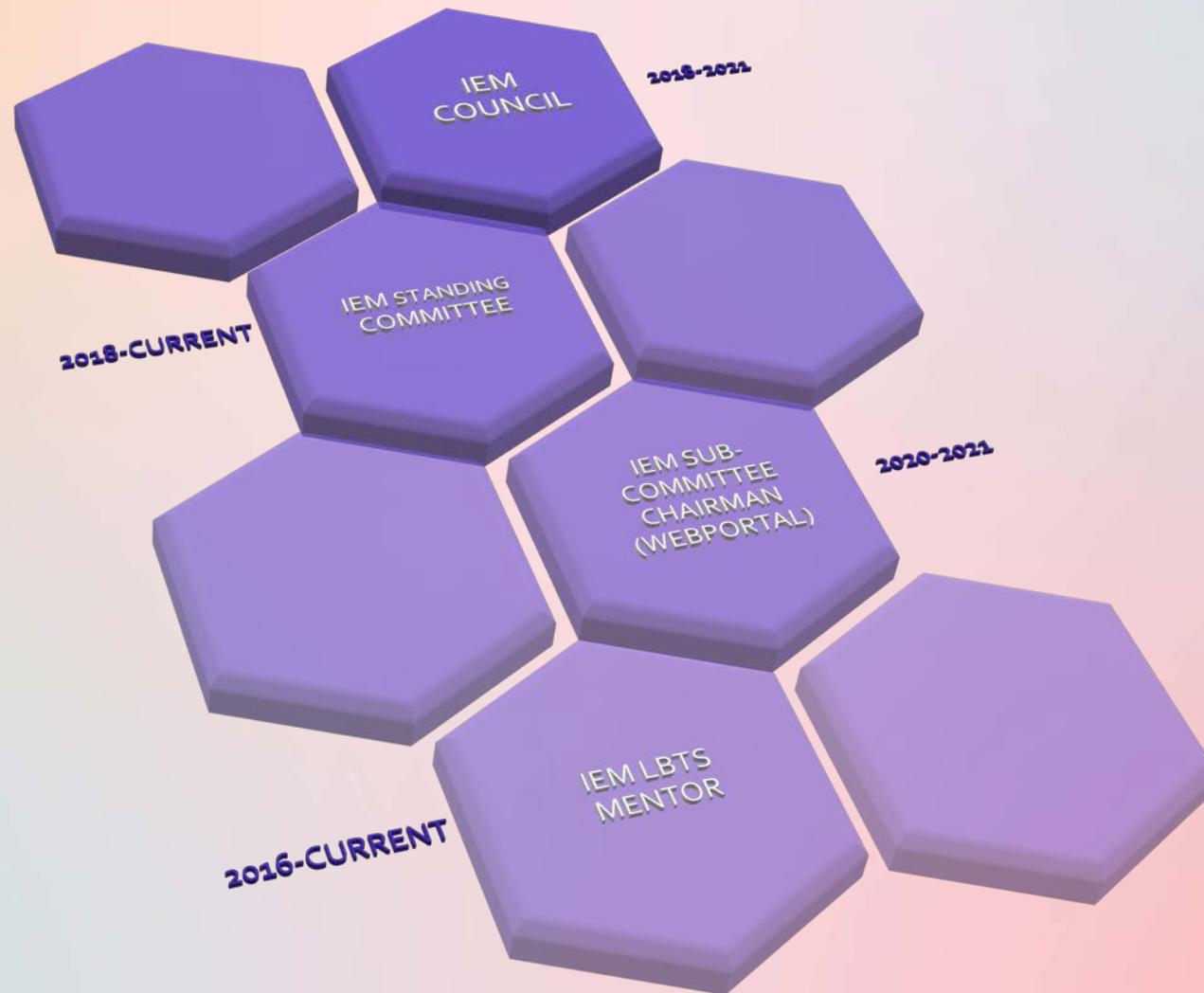


COVID19 Research with SRM Medical Hospital India





CSR





CSR

IET - Institution of Engineering and Technology, United Kingdom (2018-current)

- Professional Registration Interviewer (PRI)
- International Professional Registration Advisor (IPRA)
- CEng. Assessor

Associate Editor / Guest Editor-in-Chief

- IEEE *ACCESS*
- IET *Image Processing*
- *Frontiers in Public Health*
- *Current Medical Imaging*
- *Journal of Healthcare Engineering*
- And many more...

Panelist / Board Member

- Engineering Accreditation Council (EAC), BEM
- Human Life Advancement Foundation (HLAF)
- Universiti Sains Islam Malaysia (USIM)



THANK YOU



Committed to Engineering Excellence

BOARD OF ENGINEERS MALAYSIA

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