



**Dr. Kalaivani Chellappan**  
Ph.D

#### EXPERTISE

- *Bio-signal Processing & Identification*
- *Modeling of Physiologic Systems*
- *Cardiovascular Engineering*
- *IoT in Healthcare*

#### RESEARCH

- *Characterisation of Flow-Dependent Indices of Arterial Stiffness*
- *Blood Flow Analysis and Non-Invasive Estimation of Arterial Ageing*
- *Finger vascular function and non-invasive assessment of heart dynamics*
- *Haemodynamics and Vascular function*
- *IoT in Dengue Fever Monitoring*

#### PROFESIONAL AFFILIATIONS

- *IEEE Engineering in Medicine and Biology Society*
- *Board of Engineers Malaysia*

#### CONTACT

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#### BRIEF RESEARCH/COMMUNITY/CONSULTATION SNAPSHOT



Fig. 1. Knowledge Transfer Grant Prototype



Fig. 2. Data Engineering & Analytics Research Team.

#### SELECTED PUBLICATIONS

1. Chellappan K, Sahathevan R , 2015 , Cerebrovascular Diseases , Accelerated aging and noninvasive cardiovascular risk monitoring , 40 , Suppl.1 , 25-27
2. Edmond Zahedi, Vahid Sohani, MA Mohd Ali, Kalaivani Chellappan and Gan Kok Beng, , 2015, ISI, Experimental feasibility study of estimation of the normalized central blood pressure waveform from radial photoplethysmogram , Journal of Healthcare Engineering , 121-144
3. Aminuddin A., Chellappan K., Maskon O., Zakaria Z., Karim A.A., Ngah W.Z., Nordin N.A.M. , 2014 , Saudi Medical Journal , Augmentation index is a better marker for cardiovascular risk in young Malaysian males: A comparison of involvement of pulse wave velocity, augmentation index, and C-reactive protein , 35 , 2 , 138-146
4. Al-qazzaz, Noor Kamal; Ali, Sawal Hamid Bin Md.; Ahmad, Siti Anom; Chellappan, Kalaivani; Islam, Md. Shabui; Escudero, Javier. , 2014 , The Scientific World Journal. , Role of EEG as Biomarker in the Early Detection and Classification of Dementia. , 2014: 1-16.
5. Chellappan, K. , 2014 , Journal of Neuroepidemiology , Noninvasive vascular risk prediction using photoplethysmogram , 43 , 2 , 71-113
6. Rubana H. Chowdhury, Mamun B. I. Reaz, Mohd Alauddin Bin Mohd Ali, Ashrif A. A. Bakar, K. Chellappan, T. G. Chang, , 2013, ISI, Surface Electromyography Signal Processing and Classification Techniques , Sensors , 13(9):12431-12466
7. Kalaivani Chellappan, Edmond Zahedi, Mohd Alauddin Mohd Ali. (2008). An Age Index for Vascular System Based on Photoplethysmogram Pulse Contour Analysis. IFMBE Proceedings, 4th Kuala Lumpur International Conference on Biomedical Engineering. Vol:21;pp:125-128
8. Edmond Zahedi, Kalaivani Chellappan, Mohd Alauddin Mohd Ali and Harwant Singh . (Dec 2007). Analysis of the Effect of Ageing on Rising Edge Characteristics of the Photoplethysmogram using a Modified Windkessel Model. International Journal of Cardiovascular Engineering, Springer. Vol7(4) (172 – 181)

