



## Eng. H. R. Jayetileke

*Senior Lecturer Grade II*

**Specialization:** *Mechatronics Engineering and  
Automobile Technology*

### CONTACT

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### EDUCATION

2019

**M.Phil.**

*“An Intelligent Dynamic Controller for a Four-Wheel Drive  
Electric Rover”, OUSL, SL.*

2012

**B.Tech.Eng.(Hons.) in Mechatronics Engineering,  
OUSL, SL.**

### PERSONAL PROFILE

Eng. H. R. Jayetileke is a Mechatronics Engineer received his Bachelor of Technology, Engineering (B.Tech.Eng.) degree in Mechatronics Engineering (2012) from the Open University of Sri Lanka his Master of Philosophy research degree (M.Phil.) in Automobile Engineering and Artificial Intelligence (2019) from the same university. He joined the Department of Mechanical Engineering in the Faculty of Engineering Technology at the Open University of Sri Lanka as a Lecturer and Tutor after receiving his bachelor's degree. He also became a Research Assistant at the Electrical and Computer Engineering Department in the same Faculty. He has professional experience as a System Development Engineer with JLanka Technologies (PVT) LTD in the engineering sector. Since 2013 he is an Associate member and since 2020 he is a registered member of the Institution of Engineers Sri Lanka (IESL) and Engineering Council Sri Lanka (ECSL) respectively. He joined the Department of Materials and Mechanical Technology in the Faculty of Technology at the University of Sri Jayewardenepura in 2021 where he is currently working as a Senior Lecturer.

### PROFESSIONAL QUALIFICATIONS

Associate member of the Institution of Engineers, Sri Lanka (IESL).

Membership Number: AM-14822

Member of the Engineering Council, Sri Lanka (ECSL).

ECSL Number: 203519

## RESEARCH INTERESTS

Mechatronics engineering, Automobile technology, Smart vehicle technology, UAVs, UUVs, Power electronics & motor drives, Artificial intelligence, Machine vision, IoT and IIoT.

## TEACHING

Eng. H. R. Jayetileke teaches the following course models:

### ETT 3152

Automobile Design Project

### ETT 4302

Automobile Safety

### ETT 4312

Special Purpose Vehicles

## POSITIONS HELD

Since 2021

Senior Lecturer Grade II, in the Department of Materials and Mechanical Technology, Faculty of Technology, University of Sri Jayewardenepura.

2019 – 2021

Lecturer in the Department of Mechanical Engineering, Faculty of Engineering Technology, Open University of Sri Lanka, Sri Lanka.

2020 - 2021

Served as a Technical Project Coordinator and Design Engineer in EUSL (European Union Sri Lanka) energy management project by OUSL, UoM, UoP and UoR.

2020

Visiting Lecturer, in the Department of Applied Computing, Faculty of Technology, University of Kelaniya.

2019

Visiting Lecturer at Jinasena Training Foundation, Ekala.

2018

Served as an Engineering consultant for Kapla Motor Industries (Electric Car)

2018 – 2019

Research Assistant in the Department of Electrical and Computer Engineering, Faculty of Engineering Technology, Open University of Sri Lanka, Sri Lanka.

2016 – 2017

Tutor in the Department of Mechanical Engineering, Faculty of Engineering Technology, Open University of Sri Lanka, Sri Lanka.

2015 – 2016

System Development Engineering at JLanka Technologies (PVT) LTD.

2012 – 2014

Tutor in the Department of Mechanical Engineering, Faculty of Engineering Technology, Open University of Sri Lanka, Sri Lanka.

## Research Articles

**H. R. Jayetileke**, W. R. de Mei and H. U. W. Ratnayake, "Real-time fuzzy logic speed tracking controller for a DC motor using Arduino Due," *7th International Conference on Information and Automation for Sustainability*, **2014**, pp. 1-6, doi: 10.1109/ICIAFS.2014.7069560.

**H. R. Jayetileke**, W. R. de Mel and H. U. W. Ratnayake, "Modelling and simulation analysis of the genetic-fuzzy controller for speed regulation of a sensed BLDC motor using MATLAB/SIMULINK," *2017 IEEE International Conference on Industrial and Information Systems (ICIIS)*, 2017, pp. 1-6, doi: 10.1109/ICIINFS.2017.8300340.

**H. R. Jayetileke**, W. R. de Mel, H. U. W. Ratnayake. A Dynamic AI Controller, for a Field-Oriented Controlled BLDC Motor to Achieve the Desired Angular Velocity and Torque. *International Journal of Intelligent Systems and Applications in Engineering. IJISAE*. **2019**, 7, 166-182.

R. P. D. T. Rathnayaka, K. V. J. P. Ekanayake, H. U. W. Rathnayake and **H. R. Jayetileke**, "Fleet management with real-time data analytics," *2021 6th International Conference on Information Technology Research (ICITR)*, **2021**, pp. 1-6, doi: 10.1109/ICITR54349.2021.9657406.

**Jayetileke, H. R.**, de Mel, W. ., & Ratnayake, . H. . (2021). Dynamic Optimization Self-adaptive AI Controller for a Four-wheel Independent Drive Electric Rover. *Advances in Technology*, 1(1), 127–145. <https://doi.org/10.31357/ait.v1i1.4873>

**Jayetileke, H.R.**; de Mel, W.R.; Mukhopadhyay, S.C. Real-Time Metaheuristic Algorithm for Dynamic Fuzzification, De-Fuzzification and Fuzzy Reasoning Processes. *Appl. Sci.* 2022, 12, 8242. <https://doi.org/10.3390/app12168242>