

# FERNANDO

Inspire to Aspire



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## EXPERIENCE

Instructor Grade II

Department of Aeronautical Engineering

December 2018 - Present KDU, Sri Lanka

- Conduct Lectures (Full/Sub)
- Conduct Practical/classes/assignments/ tutorials
- Co-supervision of undergraduate research
- Sub - Coordinator BSc. (Hons) in Aircraft Maintenance degree program
- Course content development
- Department Representative of Faculty Research Cell - 2019
- Department Representative of Faculty IT Cell
- End semester examination invigilator
- Industrial Training Coordinator - 2019
- International accreditation Coordinator
- Engineering Faculty Prospectus and Student Handbook preparation committee Chairman

Temporary Instructor

Department of Aeronautical Engineering

March 2018 - Decmber 2018 KDU, Sri Lanka

- Conduct Practical/classes/assignments/ tutorials
- Department Representative of Faculty Research Cell
- Department Representative of Faculty IT Cell
- Sub - Coordinator BSc. (Hons) in Aircraft Maintenance degree

Trainee Aircraft Engineer

Aeronautical Engineering Wing - SLAF

May 2017 - Decmber 2017 Katunayake, Sri Lanka

- Conduct Hands on aircraft maintenance tasks as a trainee Aircraft Engineer in live hangar environment

## RESEARCH OBJECTIVE

Dedicated and passionate academia seeking for a Doctoral reading opportunity in Aerospace Engineering associated with Artificial Intelligence supported, Thrust Vectoring and Augmentation for Controllability or Aircraft Engineering Management incorporated with areas of Maintenance Manpower modeling, Resource management, Inventory control philosophies to carryout comprehensive research

## ACHIEVEMENTS

- Best Paper Award**  
3rd ASRES World Congress on Engineering and Applications (WCEA)- Kuala Lumpur, Malaysia, 2018

## AREAS OF INTEREST

- Hypersonic Air Travel
- Gas-turbine Engine performance
- Thrust Vectoring
- Manpower and Work efficiency optimization
- Sustainable energy
- Data Analysis Machine Learning
- Aircraft Controllability
- Resource Management

## COMPUTING TOOLS

- Python
- MathLab
- OpenFoam
- Fluent
- Solidworks
- AutoCAD
- R

## LANGUAGES

- English ●●●●●
- Sinhala ●●●●●
- Tamil ●●●●●
- Spanish ●●●●●

## EDUCATION

B.Sc.(Hons) in Engineering in Aircraft Maintenance Engineering  
FGPA 3.56 (2nd Class Upper Division)  
2014 - 2018 KDU, Sri Lanka

GCE Advanced Level  
Physics - C Combined Mathematics - S  
Chemistry - S  
2012 President's College

## DISSERTATION

Bachelor's Thesis

**FACTORS TO CONSIDER IN PROPER MANAGEMENT OF HUMAN RESOURCE FOR AN AIRCRAFT MAINTENANCE ORGANIZATION**

📅 1 - year

Supervised by - Dr. WTS Rodrigo - KDU

Bachelor's Mini Project

**ANALYSING THE EFFECTS OF THE WEIGHT OF AIRCRAFT SEAT WITH REGARD TO THE FUEL CONSUMPTION**

📅 6 - months

Supervised by - Dr. WTS Rodrigo - KDU

## OTHER QUALIFICATIONS

Fundamentals of Aviation Law

**ID 0000911858 LK**

📅 2020

📍 IATA elearning

Introduction to Quality Management

**ID 1340-9298365**

📅 2020

📍 Alison eLearning Center

Data Analytics - Introduction to Machine Learning

**ID 1631-9298365**

📅 2020

📍 Alison eLearning Center

Advanced Python

**ID k35gsgqPPfWbH2DZvhaSYjN**

📅 2020

📍 LinkedIn eLearning

WIPO Academy's General Course-Intellectual Property

**ID DL101E19S3**

📅 2019

📍 WIPO

Computer Hardware Engineering Technology

**ID 2013/26647**

📅 2014

📍 LAVTC

## INVITED TALKS

Engineering Faculty Research Cell Seminar

📅 2019 Feb 28th

AIAA Mid-Atlantic Section - Young Professionals, Students, and Educators (YPSE) Conference

📅 2020 Oct 15th

## ADDITIONAL ACTIVITIES

Blog Writer

Magazine Article writer

Guitarist

Citizen Scientist - International Astronomical Search Collaboration

## TAUGHT MODULES

Quality Management Systems

Field Specific Softwares - Solidworks

Data Analytics by R

## MEMBERSHIPS

- Life member of Sri Lanka Association for the advancement of Science (SLAAS)
- Associate Member Royal Aeronautical Society (RAeS)
- Professional Member of American Institute of Aeronautics and Astronautics (AIAA)
- Member of Space Generation Advisory Council (SGAC)
- Global Member Internet Society
- Sri Lankan Chapter Member Internet Society - Asia-Pacific region

## SPORTS

Cricket

Swimming

Volleyball

## ONGOING RESEARCH

- Feasibility study for Wind farming with vertical blade wind turbine mid-tower assembly
- Using Rapid Cellular Regeneration with Programmable Nano Particles for Critical Component Repair while in Air under Emergency Conditions
- Tool management system for Aircraft Maintenance hangar facility
- Ancient Flight Aerodynamics and Flight capability

## REFEREES

**Dr.(Mrs) WCDK Fernando**  
(Former Dean Faculty of Engineering)

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**Dr. WTS Rodrigo**  
(Senior Lecturer Aeronautical Engineering)

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# PUBLICATIONS

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## Journal Articles

- Fernando, W.D.T. (2018a). "Advanced modelling of KF implemented flying wing". In: *International Journal of Engineering Sciences (ISSN 0976 - 6693)* 11 (4), pp. 143-148.

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## Conference Proceedings

- Fernando, W.D.T. (2020). "Using Rapid Cellular Regeneration with Programmable Nano Particles for Critical Component Repair while in Air under Emergency Conditions". In: Virginia,USA: AIAA 2020 Next Gen Technical Symposium - Materials, Structures, Dynamics.
- Rodrigo, W.T.S. and Fernando W.D.T. (2020). "An enumerative constraint planning framework for airline engineering manpower cost optimization". In: Ratmalana, Sri Lanka: XIII International Research Conference, General Sir John Kothalawala Defence University.
- Fernando, W.D.T. (2018b). "Tri-engine single thrust vector analysis for yaw movement of flying wing." In: Bangkok Thailand: 2018 IEEE 5th International Conference on Engineering Technologies and Applied Sciences (ICETAS).
- Fernando W.D.T. Madushanka N.V.K.L., Rajapaksha R.S.R.C. and Rodrigo W.T.S. (2016). "Analysing the "northrop gruman b2 spirit" aircraft's operational and design aspects in order to ascertain the issues related to flying wing concept in implementing as a commercial airliner". In: Ratmalana, Sri Lanka: IX International Research Conference, General Sir John Kothalawala Defence University.
- Fernando, W.D.T. (2017c). "KF Implemented Flying Wing". In: Ratmalana, Sri Lanka: X International Research Conference, General Sir John Kothalawala Defence University.
- Fernando W.D.T., De Silva P.H.P.P and Rodrigo W.T.S. (2017b). "Waste elimination and productivity enhancement framework for aviation maintenance manpower through value stream mapping". In: Ratmalana, Sri Lanka: X International Research Conference, General Sir John Kothalawala Defence University.
- Fernando W.D.T. Gunasiri W.M.I.M, Bitare E. and Masengesho S. (2017a). "Factors to consider in proper management of human resource for an aircraft maintenance organization". In: Colombo, Sri Lanka: 73rd Annual Scientific Sessions, Sri Lanka Association of Advancement of Science.

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## Patents

- W.D.T., Fernando (2019a). "A Wing Lift Generation Device". In: *NIPO Sri Lanka*. LK/P/20694: National Patent, -Pending.

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## Magazine

- W.D.T., Fernando (2019b). *Too Slow? Not Anymore!(Cover Article)*. ISSN: 1391-0299. 3-7, 36(1). National Science Foundation, Sri Lanka.