

## **CURRICULUM VITAE**



Dr. Fairuz Izzuddin Romli, Associate Professor, Department of Aerospace Engineering, Faculty of Engineering, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor

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#### Education

- 1. PhD in Aerospace Engineering, 2009, Georgia Institute of Technology, USA
- 2. MSc Statistics, 2008, Georgia Institute of Technology, USA
- 3. MSc Aerospace Engineering, 2003, Georgia Institute of Technology, USA
- 4. BEng Aerospace Engineering, 2001, Universiti Putra Malaysia, Malaysia

# **Areas of Interest**

- 1. Systems Design Process: Development of methodologies and tools to support system design procedures, particularly for aircraft system design process
- 2. Air Traffic Management: Study of air traffic trends and its system-of-systems design
- 3. Others: Related researches that involves design methodologies and tools, optimization procedures, statistical analysis, etc.

# **Professional Qualification/Membership/Affiliation**

- 1. President, Aerospace Malaysia Society (AEROS Malaysia)
- 2. Graduate Member, Board of Engineers Malaysia (BEM)
- 3. Member, International Association of Computer Science and Information Technology (IACSIT)
- 4. Member, Science and Engineering Institute (SCIEI)
- 5. Member, Universal Association of Mechanical and Aeronautical Engineers (UAMAE)

	<b>Appointments</b>						
Pos	sition	Duration					
1.	Member of Task Force Group for Innovation in Delivery Method of Teaching and Learning, Universiti Putra Malaysia	2018 – Present					
2.	Head of Aerospace Design and Applications Research Group, Department of Aerospace Engineering, UPM	2009 - Present					
3.		2009 - Present					
4.		2018 – 2018					
5.	Academic Coordinator, Department of Aerospace Engineering, UPM	2012 – 2017					
6.	Head of Academic Unit for Aerospace Design and Simulation Group, Department of Aerospace Engineering, UPM	2009 – 2013					
7.	AEROS Club Advisor, Department of Aerospace Engineering, UPM	2009 - 2013					
8.	Student Affairs and Alumni Coordinator, Department of Aerospace Engineering, UPM	2009 – 2012					

# **Publications (Latest 3 Years)**

## Journals (Citation-indexed journals)

- 1. **F. I. Romli**, N. H. Ariffin (2018). Malaysian Public Survey on the Current Carry-on Luggage Handling Onboard Commercial Transport Aircraft. International Journal of Engineering and Technology. 7(4.13). pp. 14-17
- 2. N. Ozve Aminian, F. I. Romli (2018). Ergonomics Assessment of Current Aircraft Passenger Seat



- Design against Malaysian Anthropometry Data. International Journal of Engineering and Technology. 7(4.13). pp. 18-21
- 3. S. Kamarbhari, F. A. Aziz, **F. I. Romli** (2018). Kinematic Response of Crash Condition for Ergonomic Child Restraint System in Aircraft. Journal of Computational and Theoretical Nanoscience. 15(2). pp. 637-647
- 4. H. M. Noh, N. H. R. Yahya, G. A. Rodrigo, N. A. A. Rahman, M. R. Yusoff, J. Othman, **F. I. Romli** (2018). Sustainable Biofuel: Policy View for Commercial Aviation in Malaysia. International Journal of Engineering and Technology. 7(4.13). pp. 225-228
- 5. **F. I. Romli**, N. Ozve Aminian (2018). Ergonomic Analysis of Aircraft Passenger Seat: A Malaysian Case Study. International Journal of Pure and Applied Mathematics. 119(15). pp. 3749-3754
- 6. F. D. Ishak, **F. I. Romli**, K. Abdul Rahman (2018). Public Survey on New In-Flight Food Delivery and Waste Collection System. Journal of Mechanical Engineering. SI5(4). pp. 142-152
- 7. **F. I. Romli**, H. Rashid, M. Y. Harmin (2018). Market Potential for Personal Air Vehicle (PAV) Concept: A Malaysian Case Study. International Journal of Pure and Applied Mathematics. 119(15). pp. 3755-3760
- 8. H. R. Mohd Saiah, A. S. Mohd Rafie, **F. I. Romli** (2018). Freestream Velocity Correction in Narrow Channels. Journal of Mechanical Engineering. SI5(2). pp. 54-66
- 9. N. M. Dasuki, **F. I. Romli** (2018). Quality Function Deployment for New Standing Cabin Concept of Commercial Transport Aircraft. Journal of Mechanical Engineering. SI5(2). pp. 247-257
- 10. O. F. Marzuki, A. S. Mohd Rafie, **F. I. Romli**, K. A. Ahmad (2018). Magnus Wind Turbine: The Effect of Sandpaper Surface Roughness on Cylinder Blades. Acta Mechanica. 229(1). pp. 71-85
- 11. U. N. N. Abdullah, N. Othman, **F. I. Romli**, H. Handroos (2018). Investigation on User Experience Goals for Joystick Interface Design. Journal of Mechanical Engineering. SI5(1). pp. 133-142
- 12. S. Kamarbhari, F. Abdul Aziz, **F. I. Romli** (2018). Kinematic Response of Crash Condition for Ergonomic Child Restraint System in Aircraft. Journal of Computational and Theoretical Nanoscience. 15(2). pp. 637-647
- 13. A. R. Zahari, **F. I. Romli** (2017). Potential of Commercial Human Spaceflight. International Review of Aerospace Engineering. 10(5). pp. 282-288
- 14. J. Jalasabri, **F. I. Romli** (2017). Computational Fluid Dynamics (CFD) Study on A Hybrid Airship Design. International Review of Mechanical Engineering. 11(8). pp. 573-579
- 15. N. O. Aminian, **F. I. Romli** (2017). Study on the Potential of Airships as Urban Mass Public Transport in Malaysia. Journal of Mechanical Engineering. SI4(2), pp. 221-232
- 16. S. M. Salim, **F. I. Romli**, J. Besar, N. Ozve Aminian (2017). A Study on Potential Physical Hazards at Construction Sites. Journal of Mechanical Engineering, SI4(1), pp. 207-222
- 17. N. Othman, **F. I. Romli** (2016). Mental Workload Evaluation of Pilots using Pupil Dilation. International Review of Aerospace Engineering. 9(3). pp. 80-84

# Journals (Non citation-indexed journals)

 N. O. Aminian, F. I. Romli, S. M. Salim (2017). Evaluation of Civil Flight Deck Design using Fuzzy Logic Approach. International Journal of Engineering and Technology. 9(3). pp. 1845-1850

### **Conference Proceedings**

- F. I. Romli, N. S. Daud, N. H. A. Habibillah (2018). Robust Baseline Design Selection Methodology: Aircraft Redesign Case Study. IOP Conference Series: Materials Science and Engineering. 405(1)
- 2. N. Dasuki, **F. I. Romli**, M. Y. Harmin (2018). Generation of Design Alternatives of Vertical Passenger Seat for Standing Cabin Concept in Commercial Transport Aircraft. IOP Conference Series: Materials Science and Engineering. 405(1)
- 3. O. F. Marzuki, A. S. M. Rafie, **F. I. Romli**, K. A. Ahmad, M. F. A. Hamid (2018). An Overview of Horizontal-Axis Magnus Wind Turbines. IOP Conference Series: Materials Science and Engineering. 405(1)
- M. A. Abu, M. F. Yaacob, A. F. Ramli, H. Basaruddin, M. I. Sulaiman, M. Yaakop, I. Mohamad Sofi, F. I. Romli (2017). Electrical Appliances Control System by Using iOS. Proceedings of the International Conference on Engineering Technology and Technopreneurship, Kuala Lumpur, Malaysia.
- 5. M. F. A. Hamid, E. Gires, A. S. M. Harithuddin, A. R. A. Talib, A. S. M. Rafie, **F. I. Romli**, M. Y. Harmin (2017). Coanda Configured Aircraft: A preliminary Analytical Assessment. IOP



- Conference Series: Materials Science and Engineering. 270(1)
- M. A. Eskandari, H. K. Mazraeshahi, D. Ramesh, E. Montazer, E. Salami, F. I. Romli (2017). An Algorithm on Simultaneous Optimization of Performance and Mass Parameters of Open-Cycle Liquid-Propellant Engine of Launch Vehicles. IOP Conference Series: Materials Science and Engineering. 270(1)
- 7. M. A. Rahman, M. Y. Harmin, M. F. S. Koslan, M. R. Saad, **F. I. Romli**, M. T. Ahmad (2017). Size-scale Effects of Inboard Store-Y on X-Plane Model: A Parametric Study using CFD. IOP Conference Series: Materials Science and Engineering. 270(1)
- 8. J. Jalasabri, **F. I. Romli**, M. Y. Harmin (2017). Modelling the Effect of Changing Design Fineness Ratio of an Airship on Its Aerodynamic Lift and Drag Performance. IOP Conference Series: Materials Science and Engineering. 270(1)
- 9. M. A. Abu, M. F. Mohamad Jalil, A. F. Ramli, H. Basarudin, M. I. Sulaiman, M. Z. Suboh, F. I. Romli (2017). Smart Parking Systems by Using Espresso Lite 2.0. Proceedings of the International Conference on Engineering Technology and Technopreneurship, Kuala Lumpur, Malaysia.
- E. Salami, P. B. Ganesan, T. A. Ward, R. Viyapuri, F. I. Romli (2016). Design and Mechanical Analysis of a 3D-Printed Biodegradable Biomimetic Micro Air Vehicle Wing. IOP Conference Series: Materials Science and Engineering. 152(2016). pp. 1-7
- 11. E. Montazer, M. Mirzaei, E. Salami, T. A. Ward, **F. I. Romli**, S. N. Kazi (2016). Optimization of a Synthetic Jet Actuator for Flow Control Around an Airfoil. IOP Conference Series: Materials Science and Engineering. 152(2016). pp. 1-12
- 12. N. H. Manan, D. L. Majid, **F. I. Romli** (2016). Mould Design and Manufacturing Considerations of Honeycomb Biocomposites with Transverse Fibre Direction for Aerospace Application. IOP Conference Series: Materials Science and Engineering. 152(2016). pp. 1-7
- 13. **F. I. Romli**, K. A. Rahman, F. D. Ishak (2016). In-Flight Food Delivery and Waste Collection Service: The Passengers' Perspective and Potential Improvement. IOP Conference Series: Materials Science and Engineering. 152(2016). pp. 1-7
- 14. M. S. Othman, O. T. Chun, M. Y. Harmin, **F. I. Romli** (2016). Aeroelastic Effects of a Simple Rectangular Wing-Box Model with Varying Rib Orientations. IOP Conference Series: Materials Science and Engineering. 152(2016). pp. 1-5
- 15. **F. I. Romli**, N. Dasuki, M. Y. Harmin (2016). Market Potential Study for Standing Cabin Concept for Domestic Low-Cost Commercial Airlines in Malaysia. IOP Conference Series: Earth and Environmental Science. 30(2016). pp. 1-6

### **Books**

- 1. M. F. A. Hamid, C. C. Ciang, **F. I. Romli** [Editors] (2018). Sustainability in Aerospace Engineering and Technology. IOP Publishing
- 2. F. I. Romli [Editor] (2017) AEROS Conference 2017 Proceedings. IOP Publishing.
- 3. A. Ideris, R. Varatharajoo, **F. I. Romli**, A. R. Bakar, E. F. Arokiasamy [Editors] (2016). Borderless Open Access Education. Universiti Putra Malaysia Press
- 4. **F. I. Romli**, M. Zuber, M. R. Ishak, S. F. Shahwir [Editors] (2016). AEROTECH VI: Innovation in Aerospace Engineering and Technology. IOP Publishing

	Research Grants				
No.	Project Title	Amount (RM)	Year	Source of Fund	
1.	Fundamental Study into the Ergonomics of Aircraft Passengers' Comfort and Aircraft Cabin Design Parameters (Leader)	79,800	2019 - 2021	MOE - FRGS (Ongoing)	
2.	Conceptual Study of Automated In-Flight Food Delivery and Waste Collection System (Leader)	50,000	2018 - 2020	UPM (Ongoing)	
3.	Development of Teaching and Learning Innovation Guideline based on Best-Practices Analysis Towards the Transformation of Teaching and Learning Delivery (Member)	15,000	2018 - 2020	UPM (Ongoing)	



4.	Aeromechanics of Micro Air Vehicle Asymmetrical Flapping Wing at Low Reynolds Number ( <i>Member</i> )	50,000	2017 - 2019	UPM (Ongoing)
5.	Optimal Feedback Control of Shape Memory Alloy Actuated Morphing Wing System (Member)	95,000	2017 - 2019	UPM (Ongoing)
6.	Flight Dynamics and Control Study of Flight Transition Phases for A Small Scale Vertical Takeoff/Landing Fixed Wing Unmanned Aerial Vehicle (Member)	60,000	2017 - 2019	UPM (Ongoing)
7.	Active Flow Control for Coandă Aircraft (Member)	60,000	2017 - 2019	UPM (Ongoing)
8.	Development of Kenaf Honeycomb Core with Transverse Fiber Direction for Aerospace Application (Member)	20,000	2016 - 2018	UPM (Completed)
9.	Nonlinear Reduced-Order Aeroelastic Modeling (NROAM) of Highly Flexible Wing <i>(Member)</i>	113,600	2015 - 2018	MOHE - FRGS (Ongoing)
10.	Design and Analysis of An Ergonomic Infant Seat with Restraint System for Commercial Aircraft (Member)	15,000	2014 - 2015	UPM (Completed)
11.	The Post-buckled Coupled Mode Interaction Behavior of Aircraft Aluminum Stiffened Panels in Compression (Member)	59,000	2013 - 2015	MOHE - FRGS (Completed)
12.	Aeroelastic Tailoring of An Efficient Metallic Wing Structures Design (Member)	50,000	2013 - 2015	UPM (Completed)
13.	Three Dimensional System-of-Systems Modeling for Personal Air Vehicle (PAVE) Operation in Malaysia (Leader)	73,000	2013 - 2015	MOHE - FRGS (Completed)
14.	Preliminary Study of Vertical Seat Design for Standing Cabin Concept in Commercial Transport Aircraft (Leader)	79,000	2013 - 2015	UPM (Completed)
15.	An Alternative Concept using Magnus Effect for Low Speed Wind Harvesting (Member)	93,200	2012 - 2014	KeTTHA (Completed)
16.	An Alternative Function-based Strategy for Complex Product Design Architecture Development (Leader)	123,000	2011 - 2013	MOHE - ERGS (Completed)
17.	Development of An Engineering Change Selection Methodology for Aircraft Redesign Process (Leader)	30,000	2010 - 2011	UPM (Completed)

	Awards/Recognition					
No.	Name of Awards	Title	Award Authority	Award Type	Year	
1.	Bronze Medal	Alternative Green Energy Harvesting System using Magnus Wind Turbine	International Engineering Invention and Innovation Exhibition (i-ENVEX)	International	2015	
2.	Bronze Medal	Innovative Toothpaste Dispenser	International Innovation, Design and Articulation (i-IDeA)	International	2014	



3.	Silver Medal	Standing Cabin Concept for Commercial Aircraft Design	International Engineering Invention and Innovation Exhibition (i-ENVEX)	International	2014
4.	Gold Medal	Green Passenger Seat for Commercial Transport Aircraft Cabin	International Innovation, Design and Articulation (i-IDeA)	International	2013
5.	Bronze Medal	Potential Green Composite Material for Aerospace Applications	International Engineering Invention and Innovation Exhibition (i-ENVEX)	International	2013
6.	Gold Medal	Environmental- Friendly, Self- Sustained Concept of Cabin Design for Commercial Transport Aircraft	International Engineering Invention and Innovation Exhibition (i-ENVEX)	International	2013
7.	Bronze Medal	CROPS - A Decision- making Aid Tool for Product Redesign	Pameran Rekacipta, Penyelidikan dan Inovasi Malaysia	National	2012
8.	Bronze Medal	Integrated CO <sub>2</sub> Powering Scheme for Green Aircraft Design Concept	International Engineering Invention and Innovation Exhibition (i-ENVEX)	International	2011

	Consultation					
No.	Year	Title	Authority	Amount (RM)		
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1.	2017	Outreach to School Program	MIGHT-METEOR Advanced Manufacturing Sdn. Bhd.	9,000		
2.	2016	Outreach to School Program	MIGHT-METEOR Advanced	12,500		
			Manufacturing Sdn. Bhd.			
3.	2012	Experimental Work for	MARA Technology University	2,958		
		Characterizing Hollow Cone				
		Sorays Emanating from Swirl Atomizer				
4.	2012	Development of Training-of-	Higher Education Leadership	170,000		
٦.	2012	Trainers Module for Project-	Academy (AKEPT), MOHE	170,000		
		Oriented Problem-based Learning	rioddeniy (riner 1), werie			
5.	2009	Development of Technical	Aerospace Technology	44,000		
		Documentation for Aircraft Gas	Systems Corp. Sdn. Bhd.	•		
		Charging Trolley				

# **Student Supervision**

PhD (Main Supervisor)

No.	Name	Title	Status
1.	Norhafizah Mohamad Dasuki	Conceptual Development of Passenger Standing Cabin Design for Commercial	Ongoing
2.	Negin Ozve Aminian	Transport Aircraft: A Malaysian Case Study Conceptual Development of an Ergonomic Passenger Cabin Design for Potential	Ongoing
3.	Farah Diana Ishak	Commercial Urban Transport Airship in Malaysia Design and Development of Automated In-Flight Food Delivery and Waste Collection System	Ongoing



# **Student Supervision**

PhD (Main Supervisor)

No.	Name	Title	Status
4.	Nur Hidayah Ariffin	Conceptual Development of An Automated Carry-On Luggage System in Commercial	Ongoing
		Transport Aircraft	
5.	Salim Mbukwa Salim	Design and Development of A New Self-	Ongoing
		Sustained Aircraft Seat	
6.	Abdul Raof Zahari	Development of Regulation Guideline for Future Suborbital Flight Operation in Malaysia	Ongoing

MS with thesis (Main Supervisor)

No.	Name	Title	Status
1.	Jafirdaus Jalasabri	Computational Study on the Effects of Fineness Ratio on Aerodynamic	Graduated
2.	Ahmad Redzman Mohamad Nor	Characteristics of an Airship Design Conceptual Design of Vertical Seat in Commercial Transport Aircraft for Static Condition Flight	Graduated

MS without Thesis (Main Supervisor)

No.	Name	Title	Status
1.	Nur Ezrin Mad Sariff	Optimization of Impact Beam Design for Cars	Graduated
2.	Negin Ozve Aminian	Ergonomics Study of Classroom Chair of Malaysian Universities	Graduated
3.	Ahmad Nizam Alias	Optimization Study of Coconut-based Composite Materials	Graduated
4.	Hafiz Syafiq Ab Manan	Conceptual Personal Air Vehicle (PAV) Usage in Malaysia	Graduated
5.	Norhafizah Mohammad Dasuki	Conceptual Study of Standing Cabin for Commercial Transport Aircraft	Graduated
6.	Siti Mariam Muhamad	Development of Decision-making Aid Tool for Part Design Process	Graduated
7.	Amira Nabila Asmadi	Ergonomics Study of A Full-Standing Vertical Seat for Commercial Transport Aircraft	Graduated
8.	Erfan Salami	Conceptual Design of A Self-Sustained Aircraft Seat	Graduated
9.	Mohamad Dzulhelmy Amari	Conceptual Design of Power Generation by Piezoelectric Mechanism to the Surveillance Drone Flight System	Graduated
10.	Kawthar Abdul Rahman	Automated In-Flight Food Delivery and Waste Collection System	Graduated
11.	Logeswaran Arumugam	Centralized Lubrication Method for Vertical Roller Mill	Graduated
12.	Raad R. Mahmoud	Conceptual Design of Written Data Protection Tool for Recycled Papers	Graduated
13.	Aaron Ngu Lee Seng	Conceptual Design of A Smart Portable Weighing Scale	Ongoing
14.	Syarir Akram Jamaluddin	Conceptual Design of An Adjustable Food Storage Container	Ongoing