

# CURRICULUM VITAE



DR. **YAZDI IBRAHIM JENIE**, ST., MT.

**AFFILIATION:**

Flight Physics Group,  
Aeronautics and Astronautics,  
Faculty of Mechanical and Aerospace Engineering  
Bandung Institute of Technology

**OFFICE ADDRESS:**

Gd. Labtek II Lt. 2, ITB  
Jl Ganesha no 10, Bandung, 41032  
INDONESIA

**PHONE NUMBER:**

+62 22 2504243

**EMAIL ADDRESS:**

[yazdijenie@ae.itb.ac.id](mailto:yazdijenie@ae.itb.ac.id)  
[Y.I.Jenie-1@tudelft.nl](mailto:Y.I.Jenie-1@tudelft.nl)

**PROFILE:**

[researchgate.net](https://www.researchgate.net) : Yazdi Jenie  
[linkedin.com](https://www.linkedin.com) : Yazdi Jenie

**PLACE/DATE OF BIRTH:** Surakarta, Indonesia / April 19<sup>th</sup>, 1983

**AREA OF EXPERTISE:** Aerospace Engineering, Flight Mechanics, Flight Simulation, UAV, Autonomous Collision Avoidance System, Conflict Detection and Resolution System

**EDUCATION:**

*Doctor of Philosophy* (PhD) in Aerospace Engineering, Delft University of Technology,  
Graduated in January, 2017

**Thesis** : *Autonomous Conflict Detection and Resolution for Unmanned Aerial; On Integration into the Airspace System*

*Magister Teknik* (Master) in Aeronautics and Astronautics, Bandung Institute of Technology,  
Graduated in June, 2008 with honour (*cum laude*)

**Thesis** : *Development of a Full Mathematical Model of WiSE 8 Craft for Flight Simulator Implementation*

*Sarjana Teknik* (Bachelor) in Aeronautics and Astronautics, Bandung Institute of Technology,  
Graduated in March, 2006

**Thesis** : *Thermoforming of Carbon Fiber Reinforce Plastic (CFRP) and the Residual Strength*

**PUBLICATIONS:**

*Journal Articles*

1. **Jenie, Y. I**, van Kampen, E., Ellerbroek, J., and Hoekstra, J.M., *Taxonomy of Conflict Detection and Resolution Approaches for Unmanned Aerial Vehicle in an Integrated Airspace*, IEEE Transactions on Intelligent Transportation Systems , vol.PP, no.99, pp.1-10 (2016).
2. **Jenie, Y. I**, van Kampen, E., de Visser, C., Ellerbroek, J., and Hoekstra, J.M., *Three-Dimensional Velocity Obstacle Method for Uncoordinated Avoidance Maneuvers of Unmanned Aerial Vehicles*, Journal of Guidance, Control, and Dynamics, Vol. 39, No. 10 (2016), pp. 2312-2323.
3. **Jenie, Y. I**, van Kampen, E., de Visser, C., Ellerbroek, J., and Hoekstra, J.M., *Selective Velocity Obstacle Method for Deconflicting Maneuvers Applied to Unmanned Aerial Vehicles*, AIAA Journal of Guidance, Control, and Dynamics, volume 38, No 6 (2015), pp 1140-1146.

4. Poetro, R.E, **Jenie, Y.I**, Sasongko, R.A., Utama, S., *Pengembangan Perangkat Lunak Analisis Lintas Terbang Roket Multi-Stage (Development of Trajectory Analysis Software for Multi-Stage Rocket)*, Jurnal Teknologi Dirgantara, Vol. 10, Issue 1 (2012), pp 24-37
5. Sasongko, R.A., **Jenie, Y.I**, Poetro, R.E., *Pengembangan Perangkat Lunak Analisis Lintas Terbang Roket Multi-Stage (Development of Trajectory Analysis Software for Multi-Stage Rocket)*, Jurnal Teknologi Dirgantara, Vol. 9, Issue 2 (2011), pp 132-146
6. Muhammad, H., Samputra, H., **Jenie, Y.I**, Sembiring, J., *Simulasi Gerak dan Analisis Kestabilan Kopting Inersia Wahana Dirgantara dengan Bentuk Badan Ramping*, Jurnal Teknologi Dirgantara, Vol. 9, Issue 1 (2011), pp 28 - 40

### **Conferences/Proceedings**

1. Cheung, C., **Jenie, Y.I**, and van Kampen, E., *Experimental Validation of the Selective Velocity Obstacle method for Autonomous Collision Avoidance.*, AIAA Guidance, Navigation, and Control Conference, SciTech 2017, AIAA, Grapevine, TX, (January 2017)
2. **Jenie, Y. I**, van Kampen, E., Ellerbroek, J., and Hoekstra, J.M., *Safety Assessment of Unmanned Aerial Vehicle Operations in an Integrated Airspace*, AIAA @Infotech Conference, SciTech 2016, AIAA, San Diego, CA, (January 2016)
3. **Jenie, Y. I**, van Kampen, E., de Visser, C., Ellerbroek, J., and Hoekstra, J.M., *Three-Dimensional Velocity Obstacle Method for UAV's Uncoordinated Avoidance Maneuver*, AIAA Guidance, Navigation, and Control Conference, SciTech 2016, AIAA, San Diego, CA, (January 2016)
4. **Jenie, Y. I**, van Kampen, E., de Visser, C., Ellerbroek, J., and Hoekstra, J.M., *Selective Velocity Obstacle Method for Deconflicting Maneuvers Applied to Unmanned Aerial Vehicles*, Journal of Guidance, Control, and Dynamics, volume 38, issue 6, 1140-1146, AIAA, (May 2015)
5. **Jenie, Y. I**, van Kampen, E., de Visser, C., Ellerbroek, J., and Hoekstra, J., *Three-Dimensional Velocity Obstacle Method for UAV Deconflicting Maneuvers*, AIAA Guidance, Navigation, and Control Conference, SciTech 2015, AIAA, Kissimmee, FL, (January 2015)
6. **Jenie, Y. I**, van Kampen, E., Ellerbroek, J., and Hoekstra, J., *Conflict Detection and Resolution System Architecture for Unmanned Aerial Vehicles in Civil Airspace*, AIAA @Infotech Conference, SciTech 2015, AIAA, Kissimmee, FL, (January 2015)
7. **Jenie, Y. I**, van Kampen, E., de Visser, C., and Chu, Q., *Velocity Obstacle Method for Non-cooperative Autonomous Collision Avoidance System for UAVs*, AIAA Guidance, Navigation, and Control Conference, SciTech 2014, AIAA, Boston, MA, (January 2014)
8. **Jenie, Y. I**, van Kampen, E., de Visser, C., and Chu, Q., *Selective Velocity Obstacle Method for Cooperative Autonomous Collision Avoidance System for UAVs*, AIAA Guidance, Navigation, and Control Conference 2013, AIAA, Boston, MA, (August 2013)
9. **Jenie, Y. I**, van Kampen, E., de Visser, C., and Chu, Q., *Hybrid Modeling of Velocity Obstacle Method in Autonomous Collision Avoidance System for UAVs*, AIAA Modeling and Simulation Technology Conference 2013, AIAA, Boston, MA, (August 2013)
10. **Jenie, YI** and van Kampen, E., *An Autonomous Collision Avoidance Strategy for Unmanned Air Vehicle Guidance*, 5TH European Conference for Aeronautics and Space Sciences (EUCASS), Munich, Germany (June 2013)
11. **Jenie, YI** and van Kampen, E., *Cooperative Autonomous Collision Avoidance System for Unmanned Aerial Vehicle*, CEAS EuroGNC 2013 Conference, CEAS, Delft, The Netherlands, (April 2013)
12. Jatiningrum, D., and **Jenie, Y.I.**, Muhammad, H., Pasaribu, H.M, *Verification of Sail Flight Testing Procedures of Wing-in-Surface-Effect Craft on Engineering Flight Simulator*; to be presented, on the 27<sup>th</sup> Congress of the International Council of the Aeronautical Sciences (ICAS) at Nice, France. (September 2010)
13. **Jenie, Y.I.**, Mohamad, H., Sabastion, B., Sasongko, R.A., *Experiment on the Application of A Cube Type Gyroscope-Free Inertial Measurement Unit on LAPANs RUM Payload-Test*, to be presented in poster session, on the 27<sup>th</sup> Congress of the International Council of the Aeronautical Sciences (ICAS) at Nice, France.(September 2010)
14. Indriyanto, T., and **Jenie, Y.I.**, *Modeling and Simulation of A Ducted Fan Unmanned Aerial Vehicle (UAV) Using X-Plane Simulation Software*, on the Regional Conference on Mechanical and Aerospace Technology, at Bali, Indonesia (February 2010)

15. Pasaribu, H.M., and Jenie, Y.I., *Simulated Ditching Investigation of WiSE 8 Craft 'Undan' with Various Flight Conditions*, on the Regional Conference on Mechanical and Aerospace Technology, at Bali, Indonesia (February 2010)
16. Pasaribu, H.M., Muhammad, H., Jenie, Y.I., Sembiring, J.P., *Design and Development of WiSE Engineering Flight Simulator*, on the Regional Conference on Mechanical and Aerospace Technology, at Bali, Indonesia (February 2010)
17. Jenie, Y.I., *Development of a Full Mathematical Model of WiSE 8 Craft for Flight Simulator Implementation*; on the Taiwan-Indonesia Workshop, National Cheng Kung University, Tainan, Taiwan (December 2008)
18. Jatiningrum, D., Jenie, Y.I., Jenie, S.D., *Test Flying Unmanned WiSE as a Means for Proof of Concept*; on the 26<sup>th</sup> Congress of International Council of the Aeronautical Sciences (ICAS), Alaska, USA (September 2008)
19. Jenie, Y. I., Indriyanto, T., *X-Plane-Simulink Simulation of a Pitch-Holding Automatic Control System for Boeing 747*; on the Regional Conference on Aerospace, Science, Technology and Industry (RC-ASTI), Institut Teknologi Bandung, Bandung, Indonesia (August 2007)

#### WORK/PROJECT EXPERIENCES:

- |              |   |
|--------------|---|
| 2015-present | <b>Assistant Professor</b><br>Flight Physics Group, Aeronautics and Astronautics, Faculty of Mechanical and Aerospace Engineering, Bandung Institute of Technology (Indonesia)  |
| 2015-2016    | <b>High School Mathematics Teacher</b><br>Indonesia School in the Netherlands, Embassy of the Republic of Indonesia, Wassenaar The Netherlands  |
| 2011-2017    | <b>Researcher (PhD)</b><br>Autonomous Conflict Detection and Resolution for Unmanned Aerial; On Integration into the Airspace System, Control and Simulation Group, Faculty of Aerospace Engineering, Delft University of Technology  |
| 2009-2011    | <b>Flight Dynamics and Simulation Engineer</b><br>Design and Development of a PC-based Flight Simulator for LAPANs Roket Pengorbit Satelit (Satellite Launch Vehicle) RPS-530, Lembaga Penerbangan dan Antariksa Nasional (Indonesian National Institute of Aeronautics and Space)      |
| 2009-2011    | <b>Flight Dynamics and Simulation Engineer</b><br>Design and Development of a PC-based Flight Simulator for Low Cost Cruise Missile (LCCM), cooperation between UAVINDO, Dirjen Dikti of the Ministry for National Education, and Institut Teknologi Bandung                            |
| 2008-2011    | <b>Academic Assistant</b><br>Flight Physics Research Group, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung   |
| 2008-2009    | <b>Aero-Hydrodynamic Engineer</b><br>Design and Development of WiSE Engineering Flight Simulator (WiSE-EFS), cooperation between Badan Pengkajian dan Penerapan Teknologi (Indonesian Agency for the Assessments and Applications of Technology) and PT LAPI Institut Teknologi Bandung |
| 2007-2008    | <b>Principal Researcher (Master)</b><br>Development of a Full Mathematical Model of WiSE 8 Craft for Flight Simulator Implementation, Flight Physics Expertise Group, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung                                       |
| 2007-2008    | <b>Research Assistant</b><br>Development of 'Wing in Surface Effect' craft, WiSE A2B-SDJ, cooperation between Badan Pengkajian dan Penerapan Teknologi (Indonesian Agency for the Assessments and Applications of Technology) and PT LAPI Institut Teknologi Bandung                    |

#### ORGANIZATIONAL EXPERIENCES:

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| 2012-2014 | Scientific Division Coordinator of Indonesian Student Association in Delft (PPI-Delft), the Netherlands |
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2009	Committee of Matlab/Simulink Basic Training, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, Indonesia
2006	Committee of the 6 <sup>th</sup> Asian Control Conference, Bali, Indonesia
2005	Sport and Entertainment Division Coordinator of Indonesian Student Association in Toyohashi (PPI-Toyohashi), Japan
2004	Committee in the National Student Archery Competition, GSG- Institut Teknologi Bandung, Indonesia
2003 -2004	Chief of the Archery Unit PASOPATI, Institut Teknologi Bandung, Indonesia
2002-2003	Training Division Coordinator of the Archery Unit PASOPATI, Institut Teknologi Bandung, Indonesia

**SKILLS:**

Languages	Indonesia (Native) Inggris (Very Good)
Computer	General: OS Windows, Microsoft Office Engineering: MATLAB/Simulink, AAA, USAF DATCOM, X-Plane Programming: MATLAB, C++, BASIC, FORTRAN Graphic and CAD: AutoCAD, CATIA, CorelDRAW

**ACADEMIC REFEREES:**

PhD Advisor (1)	<b>Prof. dr. ir. Jacco M. Hoekstra,</b> Professor in Control and Operation Division, Faculty of Aerospace Engineering, Delft University of Technology, The Netherlands; <a href="mailto:J.M.Hoekstra@tudelft.nl">J.M.Hoekstra@tudelft.nl</a>
PhD Advisor (2)	<b>Dr. ir. Erik-Jan van Kampen,</b> Assistant Professor in Control and Operation Division, Faculty of Aerospace Engineering, Delft University of Technology, The Netherlands; <a href="mailto:E.vanKampen@tudelft.nl">E.vanKampen@tudelft.nl</a>
Master Advisor	<b>Prof. dr. Hari Muhammad,</b> Professor in Flight Physic Group, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, Indonesia; <a href="mailto:harmad@ae.itb.ac.id">harmad@ae.itb.ac.id</a>

Bandung, February 7<sup>th</sup>, 2017

**Yazdi Ibrahim Jenie**