



## DAFTAR PUSTAKA

- [1] Yue Gao, J. Wang, S. Gao, and J. Ding. "A General Integrated Design and Control Strategy Considering System Decomposition with Application to A Rocket Flight Attitude Control System". *IEEE/ASME Transaction on Mechatronics*. vol. 25 no. 6, pp. 2657-2666, Dec 2020.
- [2] Ogata, Katsuhiko. *Modern Control Engineering*, 5<sup>th</sup> edition, Prentice Hall: Boston, 2009.
- [3] Nise, Norman, *Control System Engineering*, 6<sup>th</sup> ed, John Wiley and Sons, Inc: USA, 1996.
- [4] F. Kehl, K. S. J. Pister, and A. M. Mehta. "An Attitude Controller for Small Scale Rockets". *Springer Tracts in Advanced Robotics*. Jan. 2015.
- [5] Xiaoshuai F., L. Liu, et al. "Design and Verification of Attitude Control System for a Boost-Glide Rocket". *IEEE Access*. Oct. 2021.
- [6] I. E. Putro and H. Septanto. *Real-Time Simulation of Embedded Controller for Missile*. Jurnal Teknologi Dirgantara. Des. 2019. Vol. 17 No. 2. Page 129-140.
- [7] I. E. Putro and F. Holzapfel. "Robust Flight Control Design using Incremental Adaptive Sliding Mode Control". *International Conference on Instrumentation, Control, and Automation (ICA)*: ITB, Indonesia. Aug 29-31. 2016.
- [8] I. E. Putro, Sofyan S., and R. Andiarti. "Incremental Control for LAPAN Turbojet UAV Considering Disturbance and Uncertainties". *International Conference on Aerospace Electronics and Remote Sensing Technology (ICARES)*: IEEE. 2019.
- [9] H. Zhuang, Q. Sun, Z. Chen, and Xianyi Z. "Robust Adaptive Sliding Mode Attitude Control for Aircraft Systems based on Back-Stepping Method". *Aerospace Science and Technology*: Elsevier. Nov. 2021. Vol. 118.
- [10] H. Y. Irwanto, I. E. Putro, and Saeri. "HILS of FPV-2600 using MyRIO-1950 as Optimal Flight Control System". *International Journal on Advanced Science Engineering Information Technology*. 2021. Vol. 11. No. 5.
- [11] A. Istiqomah, Suma'inna, A. Riyadl, R. A. Duhri, and I. E. Putro. *Lateral Stability Control of LAPAN Missile Using Incremental-based Model Reference Adaptive Control*. AIP Conference Proceedings 2366. Sept 13, 2021.
- [12] D. Zhe, C. Jiabin, S. Chunlei, C. Hongye. "Design of Longitudinal Control System for target missiles based on fuzzy adaptive PID control". *29<sup>th</sup> Chinese Control and*

*Decision Conference (CCDC). IEEEExplore. 2017.*

- [13] R. de Celis, L. Cadarso, and J. Sanchez. "Guidance and Control for High Dynamic Rotating Artillery Rockets". *Aerospace Science and Technology: Elsevier*. Vol. 64. 2017. Page 204-212.
- [14] I. E. Putro, and R. A. Duhri. "Longitudinal Stability Augmentation Control for Turbojet UAV based on Linear Quadratic Regulator (LQR) Approach". *AIP Conference Proceedings* 2226. April 22, 2020.
- [13] J. Liu, D. Li, C. Zhang. "Trajectory Correction Strategy based on Relative Deviation between Projectile and Target". *3<sup>rd</sup> International Conference on Unmanned Systems (ICUS)*. IEEE. Nov 27-28, 2020.
- [14] Zhi-an Zhang, et al. "An Accurate Prediction of the Correction Point of Trajectory Correction Projectile based on Time Window Technique". *Proceedings of the 36th Chinese Control Conference*. Dalian, China: IEEE, July 26-28, 2017.
- [15] Nelson, Robert C. 1989. *Flight Stability and Automatic Control*. University of Notre Dame: McGraw-Hill, Inc.
- [16] A. Hanif et al. "Modeling and Simulation of a Canard-based Sounding Rocket Dynamics at Climb and Descent Phases". *AIP Conference Proceedings* 2941. December 11, 2023.
- [17] I. E. Putro, A. Subiantoro, A. Halim, R. H. Triharjanto, and S. Syafiee. "Optimal Control Design of Slow Dominant Transient Response for Longitudinal Missile Dynamics". *2023 IEEE International Conference on Aerospace Electronics and Remote Sensing Technology (ICARES)*, Bali, Indonesia, 2023, pp. 1-8.
- [18] B. L. Stevens and F. L. Lewis. *Aircraft control and simulation*, 2<sup>nd</sup> ed., New York: John Wiley & Sons, Inc., 2003, page 80-81.
- [19] M. V. Cook, *Flight Dynamics Principles: A Linear Approach to Aircraft Stability and Control*, 2<sup>nd</sup> ed., London: Butterworth-Heinemann, 2007, page 85-90.
- [20] J. B. Russel, *Performance and Stability of Aircraft*, London: Butterworth-Heinemann, 2003, page 137.
- [21] A. B. Kisabo, A. F. Adebimpe, O. C. Okwo, and S. O. Samuel, "State-space modelling of a rocket for optimal control system design", *Journal of Aircraft and Spacecraft Technology*, Volume 3, 2019, 128-137.
- [22] A. Ataka et al., "Controllability and observability analysis of the gain scheduling based linearization for UAV quadrotor", *2013 International Conference on Robotics*,



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Misi  
Terbang**

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*Biomimetics, Intelligent Computational Systems, Jogjakarta, Indonesia, 2013, pp.  
212-218.*

- [23] M. Qodar Abdurrohman et al., “A modified gain scheduling controller by consider the sparseness property of UAV quadrotors”, *Journal of Mechatronics, Electrical Power, and Vehicular Technology*, Volume 6, 2015, 9-18.
- [24] Z. Wang, L. Zhai, S. Liu, “Controllability analysis of continuous-time affine nonlinear systems with time-delay”, *2020 Chinese Automation Congress (CAC)*, Shanghai, China, 2020, pp. 3451-3454.
- [25] X. Xie, S. Liu, Q. Yuan and Z. Wang, "Output Controllability Analysis of the Affine Nonlinear Systems," *2022 37th Youth Academic Annual Conference of Chinese Association of Automation (YAC)*, Beijing, China, 2022, pp. 1515-1520.
- [26] W. Yulin, T. Shengjing, G. Jie, L. Chao. “Geometric Modeling and Controllability Analysis of a Quadrotor with a Suspended Load”. *37<sup>th</sup> Chinese Control Conference*. July 25-27. Wuhan, China: IEEE, 2018.
- [27] J. Klamka. “Controllability of Nonlinear Discrete Systems”. *Proceedings of the 2002 American Control Conference* (IEEE Cat. No.CH37301), Anchorage, AK, USA, 2002.
- [28] Rao, P., Murthy Arikapalli, V., Bhowmick, S., & Ayyagari, R. “Missile Longitudinal Dynamics Control Design Using Pole Placement and LQR Methods”. *Defence Science Journal*, vol. 71(5), 2021, pp. 699-708.
- [29] F. N. H. A. Pramesti, A. I. Cahyadi, A. A. A. Rizqi, A. Hanif and I. E. Putro. “Controllability Analysis of Longitudinal Canard-based Sounding Rocket Dynamics at Certain Flight Conditions”. *2023 7th International Conference on Electrical, Telecommunication and Computer Engineering (ELTICOM)*, Medan, Indonesia, 2023, pp. 54-59.
- [30] Muhammad, Hari. *Diktat Kuliah Dinamika Terbang*. Bandung: Institut Teknologi Bandung. 2014.
- [31] Duhri, R. A. *Pengembangan Model Dinamika Terbang untuk Sistem Simulasi Terbang Generik dengan Gaya dan Momen Aerodinamika Analitik*. Bandung: Institut Teknologi Bandung, 2016.
- [32] Astrom, K. J. dan B. Wittenmark. *Adaptif Control, 2<sup>nd</sup> edition*, Dover Publications, 1994.
- [33] L. Yang, S.A. Neild, dan D.J. Wagg. “Robust Design Guidelines for Model Reference



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Adaptive Control”. *Proceedings of the World Congress on Engineering and Computer Science WCECS 2007*. October 24-26. San Francisco, USA. 2007.

- [34] J. Rothe, J. Zevering, M. Strohmeier, dan S. Montenegro. “A Modified Model Reference Adaptive Controller (M-MRAC) Using an Updated MIT-Rule for the Altitude of a UAV”. *Electronics* 2020, 9(7):1104.
- [35] J. Chen, J. Wang, dan W. Wang. “Robust Adaptive Control for Nonlinear Aircraft System with Uncertainties”. *Applied Sciences* 2020, 10(12):4270.
- [36] Z. Shi, L. Zhao, dan Y. Zhu. “Robust Adaptive Output Feedback Control for a Guided Spinning Rocket”. *International Journal of Aerospace Engineering* Vol. 2018. Issue 1. 1427487.
- [37] D. Bianchi, S. Di Gennaro, M. Di Ferdinando, dan C. Acosta Lua. “Robust Control of UAV with Disturbances and Uncertainty Estimation”. *Machines*. 2023; 11(3):352.
- [38] Campos, Luis M. B. C., dan Paulo J. S. Gil. “On Four New Methods of Analytical Calculation of Rocket Trajectories”. *Aerospace* 2018. 5(3):88.
- [39] P. Ioannou and B. Fidan. *Adaptive Control Tutorial*. SIAM: Philadelphia. 2006.
- [40] N. T. Nguyen. *Model-Reference Adaptive Control*. Springer International Publishing. 2018.
- [41] R. M. Muray, Z. Li, dan S.Sastray. *A Mathematical Introduction Robotic Manipulation*. CRC Press. 1993.