

Nguyen

Xuan Mung



Contact

Address:

Ha Man, Thuan Thanh, Bac Ninh

Phone:

+82 (0)10 4293 0910

+84 (0)3 4955 8171

Email:

xuanmung1009@gmail.com

Google Scholar:

<https://scholar.google.co.kr/citations?user=sxnbrGcAAAAJ&hl=en>

Languages

Vietnamese - Native

English – TOEIC 800/990

Korean – TOPIK 4/6

Hobbies

- Guitar and Piano
- Picnic and Camping
- Badminton
- Reading

Social Activities

- Leader of PITAR music club.

Summary

NGUYEN XUAN MUNG was born in 1991. He received the B.S. degree in mechatronics from Hanoi University of Science and Technology, Hanoi, Vietnam, in 2014, and the M.S. and Ph.D. degrees from Sejong University, Seoul, South Korea, in 2017 and 2021, respectively, both in aerospace engineering. He is currently an Assistant Professor with the Department of Aerospace Engineering, Sejong University. His research interests include unmanned aerial vehicles, spacecraft, autonomous vehicles, automation, and robotics. He is also serving as a Guest Editor for *Symmetry* and a member of Review Board of *Fractal and Fractional*.

Skills

- Self study and team working
- Research project management
- Lecturing, presentation
- Team building
- Serving

Experiences

Developer, smart phone application development, SVMC-Samsung Electronic Vietnam, Hanoi, Vietnam, 01/2014 - 02/2015.

Researcher, unmanned aerial vehicle (UAV) application development, ARworks Ltd., Seoul, South Korea, 01/2017 - 02/2018.

Assistant Professor, Department of Aerospace Engineering, Sejong University, Seoul, South Korea, from 03/2021.

Teaching subjects:

- Nonlinear Systems and Control
- Autonomous Unmanned Aerial Systems
- Digital Control and Applications
- Aerospace Sensors and Signal Processing
- Guidance, Navigation, and Control
- Introduction to Electrical and Electronic Engineering

Project Principal Investigator, Korean government's project supported by the National Research Foundation of Korea (NRF) Grant, from 09/2022.

Education

▪ **Bachelor in mechatronics (Talented Engineer)**

Hanoi University of Science and Technology, Hanoi, Vietnam

Thesis: Design and Manufacture of a 3-axis CNC machine.

GPA: 3.25 / 4 (Very Good)

▪ **Master in aerospace engineering**

Sejong University, Seoul, South Korea

Thesis: Formation Flight Control of Quadcopters based on the Leader-Follower Approach.

▪ **Ph. D. in aerospace engineering**

Sejong University, Seoul, South Korea

Dissertation: Autonomous Quadcopter Precision Landing onto Moving Platforms: New Method and Experiment.

Selected Publications

Citations: 435, h-index: 11, i-10 index: 12 (Mar 03, 2023)

- [1] N. Xuan-Mung and M. Golestani, "Energy-efficient disturbance observer-based attitude tracking control with fixed-time convergence for spacecraft," *IEEE Transactions on Aerospace and Electronic Systems*, 2022.
- [2] N. Xuan-Mung, N. P. Nguyen, D. B. Pham, M. T. Vu, T. Ha Le Nhu Ngoc, and S. K. Hong, "Quadcopter Precision Landing on Moving Targets via Disturbance Observer-based Controller and Autonomous Landing Planner," *IEEE Access*, 2022.
- [3] N. Xuan-Mung; S. K. Hong; N. P. Nguyen; L. N. N.T. Ha; T.L. Le, "Autonomous Quadcopter Precision Landing onto a Heaving Platform: New Method and Experiment," *IEEE Access* 8, pp. 167192 – 167202, 2020.
- [4] N. Xuan-Mung and S.-K. Hong, "Improved altitude control algorithm for quadcopter unmanned aerial vehicles," *Applied Sciences*, vol. 9, no. 10, p. 2122, 2019.
- [5] J.W. Lee, N. Xuan-Mung, N.P. Nguyen, S.K. Hong, "Adaptive altitude flight control of quadcopter under ground effect and time-varying load: theory and experiments," *Journal of Vibration and Control*, pp. 1-11, 2023.
- [6] N. Xuan-Mung, N. P. Nguyen, D. B. Pham, N. N. Dao, and S. K. Hong, "Synthesized Landing Strategy for Quadcopter to Land Precisely on a Vertically Moving Apron," *Mathematics*, 2022.
- [7] N. Xuan-Mung and S. K. Hong, "Robust backstepping trajectory tracking control of a quadrotor with input saturation via extended state observer," *Applied Sciences*, vol. 9, no. 23, p. 5184, 2019.
- [8] M. Golestani, W. Zhang, Y. Yang, and N. Xuan-Mung. "Disturbance observer-based constrained attitude control for flexible spacecraft," *IEEE Transactions on Aerospace and Electronic Systems*, 2022.
- [9] N.P. Nguyen, N. Xuan-Mung, Thanh, H.L.N.N., Huynh, T.T., Lam, N.T., Hong, S.K, "Adaptive Sliding Mode Control for Attitude and Altitude System of a Quadcopter UAV via Neural Network," *IEEE Access* 9, pp. 40076-40085, 2021.
- [10] T. Ha Le Nhu Ngoc, N. Xuan-Mung, M. Vu, N. P. Nguyen, Ngoc Phi, and S.-K. Hong, "Finite-time stability of MIMO nonlinear systems based on robust adaptive sliding control: methodology and application to stabilize chaotic motions," *IEEE Access* 9, pp. 21759-21768, 2021.
- [11] N. Xuan-Mung and S.K. Hong, "Robust adaptive formation control of quadcopters based on a leader–follower approach," *International Journal of Advanced Robotic Systems*, vol. 16, 2019.
- [12] N.P. Nguyen, N. Xuan-Mung, and S.K. Hong, "Actuator fault detection and fault-tolerant control for hexacopter," *Sensors*, vol. 19, 2019.

See my [Google Scholar](#) profile for the full list of my publications:

<https://scholar.google.co.kr/citations?user=sxnbrGcAAAJ&hl=en>

Under-review Papers

- [1] N. Xuan-Mung and M. Golestani, "Anti-unwinding fixed-time L2 control for flexible spacecraft attitude system spacecraft: A funnel control approach," *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2023.
- [2] N. Xuan-Mung, D. B. Pham, X. Q. Duong, M. Van, S. Lee, S. Sareh, K. Shojaei, and H.Khayyam, "Disturbance Observer-Based Feedback Linearizing Controller for 2D Motion of a Rideable Ballbot Robot," *IEEE Transactions on Industrial Electronics*, 2023.
- [3] N. Xuan-Mung, N. P. Nguyen, D. B. Pham, N. N. Dao, T. Ha Le Nhu Ngoc, M. T. Vu, and S. K. Hong, "On the Sliding Mode Control Gain-Tuning: New Theory and Experiments," *Scientific Reports – Springer Nature*, 2023.