Dr. Agus Budiyono

Chairman, CAP Solutions (capsolutions.id)
Jl RP Suroso no 6, Menteng
Jakarta 10330, Indonesia
e-mail : budiyono@alum.mit.edu

Career Goal

I aim to serve as an **Adjunct Professor,** contributing actively to research excellence, industry liaison, and human capital development, while enhancing publication productivity through strong industry partnerships and a broad international academic network.

Bio summary

Human capital consultant and technopreneur, Four degrees in Aerospace, two from MIT. Wrote 200+ papers (6362 citations, H-index: 25).
ORCID ID: https://orcid.org/0000-0002-1337-9684
WoS ID: https://www.webofscience.com/wos/author/record/JRW-9014-2023
Scopus ID: https://www.scopus.com/authid/detail.uri?authorId=26323497100
GScholar ID: https://scholar.google.com/citations?user=lfrnWhEAAAAJ&hl=en

Expertise & Interest

Technology start-ups, robotics, nanosatellite, artificial intelligence, big data, management consulting, human capital development

Education

Massachusetts Institute of Technology (MIT) — Cambridge, MA
Engineer in Aeronautics and Astronautics (E.A.A.), 2000.
Master of Science in Aeronautics and Astronautics, 1998

Bandung Institute of Technology (ITB) — Bandung, Indonesia
Doctorate in Aeronautics and Astronautics, 2008 (Cum laude)
Bachelor of Science in Aerospace Engineering, 1992
Graduated in the top 4% of the class

Scopus Publication (partial list)

1. Setijadi, A., Sukoco, A., **Budiyono, A**., Tresnawati, D., Lestari, N., Teja, H.& Munastha, K. A. (2024). Architecture Transformation: Integrating Smart Systems for Intelligent Agent-Based Service Management in Smart Organizations. *IEEE Access*. **Q1 Scopus**
2. Sivaramakrishnan, R., Rathinasamy, D., **Budiyono, A**., & Dugki, M. (2024). Toward Future Transportation: History, Adoption, Research, and Development, Challenges in Urban Aerial Mobility. *Urban Air Mobility: Intelligent, Safe and Sustainable Systems for Future Transportation*, 1.
3. Sudiyanto, T., Trilaksono, B. R., **Budiyono, A**., & Adiprawita, W. (2018). Three-Dimensional Collision Avoidance Control for UAVs using Kinematic-based Collision Threat Situation Modeling Approach. International Journal on Electrical Engineering and Informatics, 10(3), 542-579. **Q3 Scopus**
4. Pratama, M., Lughofer, E., Lim, C. P., Rahayu, W., Dillon, T., & **Budiyono, A**. (2017). pClass+: a novel evolving semi-supervised classifier. *International Journal of Fuzzy Systems*, *19*(3), 863-880. **Q2 Scopus**
5. **Agus Budiyono** , Gigun Lee , Gyou Beom Kim , Jungkeun Park , Taesam Kang ,

Kwang Joon Yoon , (2015) "Control system design of a quad-rotor with collision detection", Aircraft Engineering and Aerospace Technology: An International Journal, Vol. 87 Iss: 1, pp.59 – 66. **Q2 Scopus**

6. Ismaila B. Tijani , Rini Akmeliawati , Ari Legowo , **Agus Budiyono** , Asan G. Abdul Muthalif , (2014) "Hybrid DE-PEM algorithm for identification of UAV helicopter", Aircraft Engineering and Aerospace Technology: An International Journal, Vol. 86 Iss: 5, pp.385 – 405. **Q2 Scopus**
7. Ismaila B. Tijani, Rini Akmeliawati, Ari Legowo, **Agus Budiyono**, Nonlinear Identification of a Small Scale Unmanned Helicopter using Optimized NARX Network with Multiobjective Differential Evolution*, Engineering Applications of Artificial Intelligence*, **33**(2014):99-115, August, 2014. **Q1 Scopus**
8. Vishnu Kumar Kaliappan, Dugki Mi, Eunmi Choi and **Agus Budiyono,** Reconfigurable Intelligent Control Architecture for Small Scale Unmanned Helicopter, *J of Aerospace Engineering*, **27**(4), July, 2014. **Q2 Scopus**
9. Megawati, N. Y., Joelianto, E., & **Budiyono, A.** (2013). Safety Analysis of Linear Systems with Complex Eigenvalues using SOS. International Journal of Imaging and Robotics, 10(2), 105-120. **Q4 Scopus**
10. V.K. Kaliappan, **A. Budiyono**, D. Min, K. Muljowidodo, HILS Simulation platform for the design, testing and validation of autonomous control system for UUV, *Indian J Geo-Mar Sci.,* **41**(6):575-580, Dec. 2012. **Q4 Scopus**
11. Arshad, M. R., & **Budiyono, A**. (2012). Special Issue on Underwater system and sensor applications Preface. *Indian J Geo-Mar Sci.,* 41(6):505-507. **Q4 Scopus**
12. K. Muljowidodo, S.A. Nugroho, N. Prayogo, **A. Budiyono**, Design and Operation Analysis of Flying Trimaran USV, *Indian J Geo-Mar Sci.,* **41**(6):569-574, Dec. 2012. **Q4 Scopus**
13. K. Muljowidodo, S.A. Nugroho, N. Prayogo, B. Gunadharma, and **Agus Budiyono**, Design and Analysis of Modular Composites Drybox Hull of Hybrid Autonomous Underwater Vehicle, *Indian J Geo-Mar Sci.,* **41**(6):563-568, Dec. 2012. **Q4 Scopus**
14. D.Y. Jong, T.S. Kang, H. R. Dharmayanda and **Agus Budiyono,** H-Infinity Attitude Control System Design for a Small Scale Autonomous Helicopter with Nonlinear Dynamics and Uncertainties, *J of Aerospace Engineering*, October, 2012. **Q2 Scopus**
15. H. R. Dharmayanda, T. Kang, **Agus Budiyono**, Byeongha Kim, W Adiprawita, Parameter Identification and Design of a Robust Attitude Controller Using H∞ Methodology for the Raptor E620 Small Scale Helicopter, *International Journal of Control, Automation, and Systems*, **10**(1):88-101, 2012. **Q2 Scopus**
16. **Budiyono, A.**,Rachman H., Proportional Guidance and CDM Control Synthesis for a Short-Range Homing Surface-to-Air Missile. *J of Aerospace Engineering,***25**(2):168-177, April, 2012. **Q2 Scopus**
17. **Agus Budiyono**, Principles of GNSS, Inertial, and Multi-sensor Integrated Navigation Systems: book review, *Industrial Robot: An International Journal*, **39**(3), pp., 2012. **Q2 Scopus**
18. Vaitla Laxman, **Agus Budiyono**, Kwang Joon Yoon and Yung Hwan Byun, Improvement of the Parameterised Identification Model using Quasi-steady and Non-uniform Inflow Aerodynamic Models, *J of Aerospace Engineering.,* **24**(3):378-388, 2011. **Q2 Scopus**
19. Wisnu Adi Pradana, Endra Joelianto, **Agus Budiyono** and Widyawardana Adiprawita, Robust MIMO H∞ Integral-Backstepping PID Controller for Hovering Control of Unmanned Model Helicopter, *J of Aerospace Engineering,* **24**(4):454-462, 2011. **Q2 Scopus**
20. Tijani I.B, Rini Akmeliawati, Ari Legowo, **Agus Budiyono**, and A. G. Abdul Muthalif*,* Robust Controller for Autonomous Helicopter Hovering Control, *J of Aircraft Engineering and Aerospace Technology.,* **83**(6), 2011. **Q2 Scopus**
21. Dong-Min Kim, Ho-Geun Kim, Jung-Guk Kim, **Agus Budiyono**, A TMO-based Flight Program of an Unmanned Helicopter, *J of Aircraft Engineering and Aerospace*

Technology., **83**(6), 2011. **Q2 Scopus**

22. E Joelianto, E M Soemarjono, **Agus Budiyono**, Dini R Penggalih, Model Predictive Control for Autonomous Unmanned Helicopters, *J of Aircraft Engineering and Aerospace Technology.,* **83**(6), 2011. **Q2 Scopus**
23. **Agus Budiyono**, Model predictive control for autonomous underwater vehicle, *Indian J Geo-Mar Sci.,* **40**(2):191-199, Apr. 2011. **Q4 Scopus**
24. **Budiyono, A**. (2011). BOOK REVIEW-Underwater Robots: Motion and Force Control of Vehicle-Manipulator Systems. Indian Journal of Marine Sciences, 40(2), 296. **Q4 Scopus**
25. H.Y. Sutarto and **Agus Budiyono**, Development of linear parameter varying control system for autonomous underwater vehicle, *Indian J Geo-Mar Sci.,* **40**(2):275-286, Apr. 2011. **Q4 Scopus**
26. Rimal, B. P., Putro, I. E., **Budiyono, A**., Min, D., & Choi, E. (2011). NN-based System Identification and Control of RUAV. International Journal of Artificial Intelligence, 7(A11), 292-315. **Q3 Scopus**
27. Gilar B. Raharja and G.B. Kim, **Agus Budiyono**, Idris E. Putro, K. Yoon, Development of Small Quadrotor Autonomous Control System, *J of The Korean Society for Aeronautical and Space Sciences,*11: 391-395*,* 2010. **Q4 Scopus**
28. Seongpil Kim, **Agus Budiyono**, Jang Ho Lee, DooHyun Kim, Kwang Joon Yoon, Control System Design and Testing for a Small Scale Autonomous Helicopter, *J of Aircraft Engineering and Aerospace Technology,* 82(6): 353-359*,*Dec. 2010. **Q2 Scopus**
29. Hardian Reza Dharmayanda, **Agus Budiyono**, and Taesam Kang, State Space Identification and Implementation of H-Infinity Control Design for Small Scale Helicopter, *J of Aircraft Engineering and Aerospace Technology,* 82(6): 340-352*,*Dec. 2010. **Q2 Scopus**
30. **Agus Budiyono**, Idris E. Putro, K. Yoon, Gilar B. Raharja and G.B. Kim, Real Time Hardware Simulation of Nonlinear Small Scale Helicopter Model, *J of Aircraft Engineering and Aerospace Technology,*82(6): 360-371*,*Dec. 2010. **Q2 Scopus**
31. Muljowidodo and **Agus Budiyono**. Design and Development of Multi-rotorcraft-based Unmanned Prototypes of Personal Aerial Vehicle, *International Journal of Aeronautical and Space Sciences*, **10**(2):140-147, 2009. **Q2 Scopus**
32. Tata Sudiyanto, **Agus Budiyono**, and Muljowidodo, First Principle Approach to Modeling of Primitive Quad Rotor, *International Journal of Aeronautical and Space Sciences*, **10**(2): 148-160, 2009. **Q2 Scopus**
33. **Budiyono, A.***,* Advances in Unmanned Underwater Vehicles Technologies, *Indian J Mar Sci.,* **38**(3):282-295, Sept. 2009. **Q4 Scopus**
34. Muljowidodo K., Sapto Adi N , **Agus Budiyono** and Nico Prayogo. Design of SHRIMP ROV for Surveillance and Mine Sweeper, *Indian J Mar Sci.,* **38**(3):332-337, Sept. 2009. **Q4 Scopus**
35. Muljowidodo K., Mochammad. A. Rasyid , Sapto Adi N, and **Agus Budiyono**, Vision Based Distance Measurement System Using Single Laser Pointer Design for Underwater Vehicle, *Indian J Mar Sci.,* **38**(3):324-331, Sept. 2009. **Q4 Scopus**
36. Muljowidodo K., Sapto Adi N , Nico Prayogo, and **Agus Budiyono**, Design and Testing of Underwater Thruster for SHRIMP ROV-ITB, *Indian J Mar Sci.,* **38**(3):338-345, Sept. 2009. **Q4 Scopus**
37. **Agus Budiyono**, Muljowidodo Kartidjo and Agus Sugama, Coefficient Diagram Method for the Control of an Unmanned Underwater Vehicle, *Indian J Mar Sci.,* **38**(3):316-323, Sept. 2009. **Q4 Scopus**
38. Sitorus, E.P., Nazarudin, Y.Y., Leksono, E. and **Budiyono, A.** Design and Implementation of Paired Pectoral Fins Locomotion of Labriform Fish, *J Bionic Eng.,* 2009, **06** (01): 37-45. **Q1 Scopus**
39. **Budiyono, A.** and Wibowo, S.S.*,* Optimal Tracking Controller Design for A Small Scale Helicopter. *J Bionic Eng.,* 2007, **04** (04), 271-280. **Q1 Scopus**

40.

Experience

LAPI Ganesha Utama (LGU ITB) Bandung, Indonesia
Business Advisor (October 2024- now)
Leading new business development role based on ecosystem and joint industrial academic paper. Improve the research and innovation-based engagement with state-owned enterprises leading to 6 new contracts in 2025 valued above IDR 10 billions.

Center for Defense - ITB Jakarta, Indonesia
Senior Research Fellow (Jan 2024- now)
Responsible for the industry engagement and business development aspects of the research and development at the research center with particular focus on innovation and human capital.

CAP Solutions (capsolutions.id) Jakarta, Indonesia
Chairman (Dec 2021- now)
Providing integrated innovation solutions to our clients(corporations, government, and education entities) achieved through human capital program, consulting and project implementation.

Universitas Negeri Sebelas Maret (UNS) Surakarta, Indonesia
Member of Board of Trustees (MWA) (Jan 2020-Jan 2023)
Providing guidance, insights and industry perspective to the Rector and Senate members of the university.

Crayonpedia Bandung, Indonesia
President and Co-founder (July 2019-Aug 2021)
Leading business scale up for emerging startup in the area of digital learning.

STARNSAT Jakarta, Indonesia
Chief Innovation Officer (June 2017-now)
Leading technology and business development of new products. Empowering the corporation by creating continous innovation in the product and business process.

Bhimasena Research, Technology & Development Bandung, Indonesia
Co-founder and Chief Science Officer (December 2012-now)
As Chief Scientific Officer, leading R&D division for technology development of new products. Powering the corporation by developing international research network with various labs worldwide. Recruiting quality human resources for engineering and technology team.

RMIT University Melbourne, Australia
Associate Professor (December 2015-January 2017)
Teaching, research and industry engagement activities in the area of Aerospace engineering.

Department of Aerospace Information Engineering, Konkuk Univ. Seoul, Korea
Associate Professor (March 2013-March 2015), Assistant Professor (March 2008-2013).
Researching and developing navigation and controls for robotics and unmanned vehicles. Developing dynamics model and controls for unmanned underwater vehicles. Teaching both graduate and undergraduate programs in the relevant fields of unmanned systems. Supervising graduate students' thesis work in the field of guidance, navigation and control.

Department of Aeronautics and Astronautics, ITB Bandung, Indonesia
Lecturer (September 2003-March 2008). Researched and developed autonomous helicopter technology including electronic/electrical controls, software programs in navigation and control systems, and simulation environment. Supervised students' thesis work in the field of guidance, navigation and control. Taught undergraduate and graduate level in the subject of Optimal Control, Automatic Flight Control, System Dynamics, Inertial Engineering and Guidance and Navigation
Highlights of Contributions:

- Initiated and lead Project MINERVA (MINiature HelicoptEr for Research on Vehicle Autonomy) as the basis of multidisciplinary research on small scale helicopter in the university
- Co-founded and co-direct Center for Unmanned System Studies (CentrUMS-ITB), a research center focusing on the design and development of autonomous aerial, underwater and ground vehicles
- Organized the International Conference on Intelligent Unmanned System, Bali 2007, the first specialized conference in the field of unmanned system in the region. The conference has been organized for 15 consecutive years.

Supercritical Combustion Corp Woburn, MA Control Systems Engineer. Developed algorithms and thermodynamic cycle models for calculating and analyzing engine performance. Designed and applied control systems for a new combustion approach injecting supercritical fuel/water mixtures. Performed high temperature and pressure combustion experiments. Designed, simulated and implemented injection timing controller for reducing emission levels. Designed and fabricated instrumentation, data acquisition and measurement systems for diesel engines and gas turbi test facilities. (March 2001-May 2003)

Massachusetts Institute of Technology (MIT) Cambridge, MA Teaching Assistant. Tutored undergraduate/graduate students in small groups or on one-to- one basis in the following subjects: Calculus, Physics, Differential Equations, Linear Algebra, Mechanics of Materials, Control Systems Principles and Advanced Calculus for Engineers. (February 1998 – February 2000)

Indonesian Aircraft Industries Ltd. Bandung, Indonesia
Control Engineer. Developed mathematical models to simulate dynamics of an aircraft typical wing section. Designed and investigated control techniques for wing vibration suppression system. Researched new trends and applicable developments associated with control system technology. (November 1992-September 2001)

Department of Aeronautics and Astronautics Bandung, Indonesia
Junior Lecturer. Taught undergraduate students in the subject of Automatic Flight Control, System Dynamics, Inertial Engineering and Guidance and Navigation. Prepared research proposal and report. Conducted research in the area of flight mechanics. Simultaneous position as Control Engineer in Indonesian Aircraft Industries Ltd.
(November 1992-January 1995)

Schlumberger Assen, The Netherlands
Job Trainee. Performed measurement and testing of software and hardware used for oil exploration. Participated in onsite logging data analysis. (July-August 1991)

Research Experience

Principal Writer (IDR 1,250,000,000) 2025-2026
Jasa Consulting & Joint Industrial-Academic Papers for PT PLN (PERSERO) – PT LAPI

Ganesha Utama, ITB, Bandung, Indonesia

Principal Writer (IDR 2,200,000,000) 2025-2025
Kajian Pengolahan Data, Database, dan Aplikasi Untuk Reliability Information System di PT Kilang Pertamina Internasional - Kontrak Payung SP-21174. – PT LAPI Ganesha Utama, ITB, Bandung, Indonesia

Principal Writer (IDR 1,470,000,000) 2025-2025
Jasa Konsultansi Penyusunan Academic-Industrial Join Paper Untuk Mendukung Pengembangan Bisnis Gas Terintegrasi PT Perusahaan Gas Negara. – PT LAPI Ganesha Utama, ITB, Bandung, Indonesia

Principal Writer (IDR 1,249,525,933) 2025-2025
Jasa Pemborongan Pekerjaan Kajian Pembentukan Anak Perusahaan dan Optimalisasi Unit Bisnis PT Badak NGL (CA 25025). – PT LAPI Ganesha Utama, ITB, Bandung, Indonesia

Principal Writer (IDR 972,000,000) 2025-2025
Kajian Pengembangan Framework Asset Readiness Terintegrasi dengan Health Scoring untuk Reliability Information System di PT Kilang Pertamina Internasional - Kontrak Payung SP-21174– PT LAPI Ganesha Utama, ITB, Bandung, Indonesia

International Co-investigator (USD 200,000) 2015-2016
Development of C Band Synthetic Aperture Radar (CB-SAR) for Unmanned Aerial Vehicle Platform "SHARP-EYES", Industrial Research Program, Bhimasena—Josaphat Microwave Remote Sensing Lab, Chiba University, Japan

Co-investigator (USD 140,000) 2014-2015
Development of Small UAV System with Fixed Wing and Autonomous Flying Computer System, Industrial Research Program, Bhimasena-- Smart Robot Center, Konkuk University, Korea

International Co-investigator (USD 15,000) 2013-2015
Visual Multi Target Tracking of Unmanned Aerial Vehicles, Joint Research Program, Institut Teknologi Bandung, Indonesia

International Co-investigator (USD 15,000) 2010-2012
Control System Development for Smart Flying Robots, Joint Research International Grant Program, Diponegoro University, Indonesia

International Co-investigator (USD 10,000) 2010-2013
Hybrid Modeling and Control For Intelligent Unmanned Aerial Vehicle, Research Management Centre, Joint Research International Grant Program, Gadjah Mada University, Indonesia

Research Faculty Member (USD 2.5 million) 2009-2011
Research on Real-time Disaster-Prevention System using Unmanned Aerial Vehicle, Information Technology Research Center (ITRC), Konkuk University

International Co-investigator (USD 12,000) 2009-2011
Intelligent Autonomous Small Helicopter for Disaster Monitoring, Research Management Centre, International Islamic University Malaysia

Principle Investigator (USD 10,000) 2008
Identification Modeling of Miniature Rotorcraft based on First Principle Approach, New Professor Research Funding, Konkuk University

Researcher (USD 5,000) 2007
Development of System for Unmanned Aerial Vehicle Based-on Small Scale Helicopter, Applied Research Incentive Program, Ministry of Research and Technology, Indonesia

Researcher (USD 7,000) 2007
Modeling and Control of Rocketry, Industrial Research Partnership Program, National Aeronautics and Space Agency, Indonesia

Researcher 2006
Development of Vision-based Autonomous Landing System, PN-ITB

Researcher 2006
Development of Object Tracker System, FTI-ITB Research Program

Specialist on Aircraft System and Flight Dynamics 2005
Design of Unmanned Aerial Vehicle PUNA, ITB-BPPT (Agency for the Assessment and Application of Technology) Research Cooperation Contract, Jakarta; No: 1/LL/Kontrak/PPPIPT/BPPT/V/2005

Principle Investigator 2004
Development of Semi-autonomous Rotary-wing Unmanned Aerial Vehicle for Urban Area Surveillance, PN-ITB

Researcher 2004
Performance and Control Analysis of Wing in Ground Effect Aircraft WiGE 10-20 Pax; ITB-BPPT Research Cooperation Contract; No: 18/Kontrak/P2TMRB/BPPT/VII/2004

Researcher 2004
Design and Development of Remotely Controllled WiGE Prototype with 10-20 Pax; ITB-BPPT Research Collaboration; Contract No: 17/Kontrak/P2TMRB/BPPT/VII/2004

Journal Publications

1. Setijadi, A., Sukoco, A., **Budiyono, A**., Tresnawati, D., Lestari, N., Teja, H.& Munastha, K. A. (2024). Architecture Transformation: Integrating Smart Systems for Intelligent Agent-Based Service Management in Smart Organizations. *IEEE Access*.
2. Sivaramakrishnan, R., Rathinasamy, D., **Budiyono, A**., & Dugki, M. (2024). Toward Future Transportation: History, Adoption, Research, and Development, Challenges in Urban Aerial Mobility. *Urban Air Mobility: Intelligent, Safe and Sustainable Systems for Future Transportation*, 1.
3. Apriadi, D., **Budiyono, A**., Prihatmanto, A., Fardiman, H., Nurendra, N., Maulanda, F., & Andrika, R. (2024). Talent, Technology, and Market Expansion: Redefining Industry Engagement through University Ecosystems. *Progress And Communication In Sciences, 11*(2). doi:10.5281/zenodo.14233164
4. **Budiyono, A.,** Apriadi, D., Prihatmanto, A., Ariadji, T., Ekomadyo, A., & Andrika, R. (2024). Academic Papers as Strategic Tools for Industry Partnerships: Governance, Legal, and Knowledge Management. *Progress And Communication In Sciences, 11*(2). doi:10.5281/zenodo.14228363
5. **Budiyono, A**., Apriadi, D., Prihatmanto, A., Nurendra, N., & Andrika, R. (2024). University-Industry Collaboration through Ecosystem Models: Unlocking Innovation

and Market Potential. *Journal Of Instrumentation, Automation And Systems, 11*(3). doi:10.5281/zenodo.14233323

6. **Budiyono, Agus**, and Shin-Ichiro Higashino. 'A Review of the Latest Innovations in Uav Technology'. *Journal of Instrumentation, Automation and Systems*, vol. 10, no. 1, UNSYS digital, 2023, pp. 7–16.
7. Urakubo, Takateru, & **Agus Budiyono**. "Advancements in Tilted-Rotor Unmanned Aerial Vehicles: A Comprehensive Review." *Journal of Instrumentation, Automation and Systems* [Online], 10.3 (2023): 93-104.
8. **Budiyono, Agus**, & Gaku Masuda. "Innovative UAV Applications for Vector Surveillance and Disease Control: A New Horizon." *Journal of Instrumentation, Automation and Systems* [Online], 10.2 (2023): 39-50.
9. **Budiyono, Agus**, Ary Setijadi Prihatmanto, Tubagus F Sofhani, Eko A Prasetio, Bismo Joyodiharjo, & David G Ketaren. "The Innovation Matrix: Unleashing the Potential of Local Industries for Regional Development." *Progress and Communication in Sciences* [Online], 10.1 (2023): 9-16.
10. Sudiyanto, T., Trilaksono, B. R., **Budiyono, A**., & Adiprawita, W. (2020). Agregation Scheme of Collision Avoidance Control and Formation Forming & Keeping by Topology Switching. *Journal of Unmanned System Technology*, *8*(1), 5-16.
11. Mahatma, A. F., Sangaji, D., Adityo, M. F., Indrawanto, I., Budiyarto, A., & **Budiyono, A**. (2019). Solving Inverse Kinematics Problems of Six Degrees of Freedom Robotic Manipulator. *Journal of Instrumentation, Automation and Systems*, *4*(1), 5-9.
12. Pamungkas, A. A. S., Sangaji, D., Adityo, M. F., Indrawanto, I., Budiyarto, A., & **Budiyono, A**. (2019). Design and Implementation of Six Degree of Freedom Manipulator for Field Service Robot. *Journal of Instrumentation, Automation and Systems*, *4*(1), 1-4.
13. Sudiyanto, T., Trilaksono, B. R., **Budiyono, A**., & Adiprawita, W. (2018). Three-Dimensional Collision Avoidance Control for UAVs using Kinematic-based Collision Threat Situation Modeling Approach. International Journal on Electrical Engineering and Informatics, 10(3), 542-579.
14. Sudiyanto, T., Trilaksono, B. R., & **Budiyono, A**. (2018). Modeling of Multi-Agent System: Equations Appearing in Collision Avoidance Control Methods. *Journal of Unmanned System Technology*, *6*(1), 14-19.
15. Yunita, M., Hadi, G., Isvara, Y., Budiyarto, A., & **Budiyono, A**. (2018). Analysis of Vivaldi rectangular bow-tie and Quasi-Yagi antenna performance for S-band FMCW-SAR on UAV platform. *J. Unmanned Syst. Technol.*, *5*(3), 76-79.
16. Hadi, G. S., Isvara, Y., Yunita, M., Budiyarto, A., **& Budiyono, A**. (2017). Implementation and Testing of Low Power FMCW S-Band Radar System Design for Small UAV. *Journal of Unmanned System Technology*, *5*(2), 36-39.
17. Sangaji, D., Mahatma, A. F., Fasha, L. M., Indrawanto, I., Budiyarto, A., & **Budiyono, A**. (2017). Design, Manufacture and Testing of Unmanned Ground Vehicle for Field Service Operation. *Journal of Unmanned System Technology*, *5*(2), 31-35.
18. Wardhana, S. G., Haris, L., Anam, H**., Budiyono, A**., & Budiyarto, A. (2017). Manufacturing Process of Diver Propulsion Vehicle. *Journal of Unmanned System Technology*, *4*(3), 66-68.
19. Dewi, P. T., Putra, H. M., Hadi, G. S., Budiyarto, A., & **Budiyono, A.** (2017). Flight Test Data Analysis of Hybrid Vertical Take-off and Landing Unmanned Aerial Vehicle. *Journal of Instrumentation, Automation and Systems*, *3*(3), 53-57.
20. Pratama, M., Lughofer, E., Lim, C. P., Rahayu, W., Dillon, T., & **Budiyono, A**. (2017). pClass+: a novel evolving semi-supervised classifier. *International Journal of Fuzzy Systems*, *19*(3), 863-880.
21. Rimal, B. P., Putro, I. E., **Budiyono, A**., Min, D., & Choi, E. (2016). System identification of nn-based model reference control of ruav during hover. *arXiv preprint arXiv:1610.00089*.
22. Tijani, I., & **Budiyono, A.** (2016). Robust control of an unmanned underwater vehicle with parametric uncertainty. *J Instrum Autom Syst*, *2*, 72-80.

23. **Agus Budiyono** , Gigun Lee , Gyou Beom Kim , Jungkeun Park , Taesam Kang , Kwang Joon Yoon , (2015) "Control system design of a quad-rotor with collision detection", Aircraft Engineering and Aerospace Technology: An International Journal, Vol. 87 Iss: 1, pp.59 – 66
24. Mahmud, I., Akmeliawati, R., & **Budiyono, A**. (2014). DE-based Robust Controller Design for Helicopter Cruise Control. International Journal Of Robotics And Mechatronics, **1**(4), 145-151
25. Hadi, G., Varianto, R., Trilaksono, B., & **Budiyono, A**. (2014). Autonomous UAV System Development for Payload Dropping Mission. Journal Of Instrumentation, Automation And Systems, **1**(2), 72-77
26. Ismaila B. Tijani , Rini Akmeliawati , Ari Legowo , **Agus Budiyono** , Asan G. Abdul Muthalif , (2014) "Hybrid DE-PEM algorithm for identification of UAV helicopter", Aircraft Engineering and Aerospace Technology: An International Journal, Vol. 86 Iss: 5, pp.385 - 405
27. Ismaila B. Tijani, Rini Akmeliawati, Ari Legowo, **Agus Budiyono**, Nonlinear Identification of a Small Scale Unmanned Helicopter using Optimized NARX Network with Multiobjective Differential Evolution*, Engineering Applications of Artificial Intelligence*, **33**(2014):99-115, August, 2014
28. Vishnu Kumar Kaliappan, Dugki Mi, Eunmi Choi and **Agus Budiyono,** Reconfigurable Intelligent Control Architecture for Small Scale Unmanned Helicopter, *J of Aerospace Engineering*, **27**(4), July, 2014
29. Megawati, N. Y., Joelianto, E., & **Budiyono, A**. (2013). Control of Autonomous Helicopter Models with Robust H2-Type Switched Linear Controller. International Journal of Applied Mathematics and Statistics, **35**(5), 137-148.
30. Gyou Beom Kim, Trung Kien Nguyen, **Agus Budiyono,** Jung Keun Park, Kwang Joon Yoon, and Jinok Shin, Design and Development of a Class of Rotorcraft-based UAV, *International Journal of Advanced Robotic Systems*, **10**(1):1-9, Feb. 2013. Q2
31. Megawati, N. Y., Joelianto, E., & **Budiyono, A.** (2013). Safety Analysis of Linear Systems with Complex Eigenvalues using SOS. International Journal of Imaging and Robotics, 10(2), 105-120.
32. V.K. Kaliappan, **A. Budiyono**, D. Min, K. Muljowidodo, HILS Simulation platform for the design, testing and validation of autonomous control system for UUV, *Indian J Geo-Mar Sci.,* **41**(6):575-580, Dec. 2012
33. Arshad, M. R., & **Budiyono, A**. (2012). Special Issue on Underwater system and sensor applications Preface. *Indian J Geo-Mar Sci.,* 41(6):505-507
34. K. Muljowidodo, S.A. Nugroho, N. Prayogo, **A. Budiyono**, Design and Operation Analysis of Flying Trimaran USV, *Indian J Geo-Mar Sci.,* **41**(6):569-574, Dec. 2012
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1. Ahmudiarto, Y., Romadoni, A. M., Karyanto, T. B., Admono, T., Nugroho, B., Chin, R. C., & **Budiyono, A**. (2019, October). Performance Analysis of Novel Blade Design of Vertical Axis Wind Turbine. In *2019 International Conference on Sustainable Energy Engineering and Application (ICSEEA)* (pp. 175-181). IEEE.
2. Sutrisno; Salmah; Joelianto, E.; **Budiyono, A**.; Wijayanti, I.E.; Megawati, N.Y., "Tracking control for hybrid system of unmanned small scale helicopter using predictive control," Robotics, Biomimetics, and Intelligent Computational Systems (ROBIONETICS), 2013 IEEE International Conference on , vol., no., pp.182,187, 25- 27 Nov. 2013
3. Loan Thi Kim Au; Vu Hoang Phan; **Budiyono, A**.; Hoon Cheol Park, "Dynamic stability in vertically flying insect-mimicking flapping wing system," Ubiquitous Robots and Ambient Intelligence (URAI), 2013 10th International Conference on , vol., no., pp.27,28, Oct. 30 2013-Nov. 2 2013
4. Salmah; Sutrisno; Joelianto, E.; **Budiyono, A.;** Wijayanti, I.E.; Megawati, N.Y., "Model predictive control for obstacle avoidance as hybrid systems of small scale helicopter," Instrumentation Control and Automation (ICA), 2013 3rd International Conference on , vol., no., pp.127,132, 28-30 Aug. 2013
5. Setiawan, J.D.; Setiawan, Y.D.; Ariyanto, M.; Mukhtar, A.; **Budiyono, A**., *Development of real-time flight simulator for quadrotor*, 2012 International Conference on Advanced Computer Science and Information Systems (ICACSIS), , vol., no., pp.59,64, 1-2 Dec. 2012
6. Vishnu Kaliappan, Hanmaro Young, Dugki Min and **Agus Budiyono**, *Behavior-based decentralized approach for cooperative control of a multiple small scale unmanned helicopter*, Eleventh International Conference of Intelligent Systems Design and Applications (ISDA 2011), Nov 22-24, 2011, Cordoba, Spain
7. Endra Joelianto, Dennis Hartono, **Agus Budiyono**, Salmah, and Indah Emilia W, *Autonomous Helicopter Model Flight using Robust H2-Type Switching Control*, 7th International Conference on Intelligent Unmanned System, Chiba, Japan, November 1-2, 2011
8. Kaliappan, V.K.; Young, H**.; Budiyono, A**.; Dugki Min, "Fault tolerant controller design for component faults of a small scale unmanned aerial vehicle," Ubiquitous Robots and Ambient Intelligence (URAI), 2011 8th International Conference on , vol., no., pp.79,84, 23-26 Nov. 2011.
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11. **Budiyono, A**.; Adiprawita, W.; Riyanto, B., "Modeling and control of unmanned flying robots," Electrical Engineering and Informatics (ICEEI), 2011 International Conference on , vol., no., pp.1,7, 17-19 July 2011
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15. Salmah, Endra Joelianto, Noorma Y. Megawati, **Agus Budiyono**, Herman Y. Sutarto , and Indah Emilia, *Safety Analysis of Helicopter Models using Hybrid Systems with*
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30. **Agus Budiyono**, Agus Sugama, Muljowidodo and Sapto Adinugroho, *First Principle Approach to the Dynamic modeling of Unmanned Underwater Vehicles*, The 2nd International Conference on Underwater System Technology: Theory and

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44. **Budiyono, A.** and Sudiyanto, T*., An Algebraic Approach for the MIMO Control of Small Scale Helicopter.* International Conference on Intelligent Unmanned System, ICIUS, Bali, October 24-25, 2007
45. **Budiyono, A.,** Sudiyanto, T. and Lesmana, H*., First Principle Approach to Modeling of Small Scale Helicopter.* International Conference on Intelligent Unmanned System, ICIUS, Bali, October 24-25, 2007
46. Haryanto, I., Setiawan, J.D. and **Budiyono, A.***, Structural Damage Detection Using Randomized Neural Networks.* International Conference on Intelligent Unmanned System, ICIUS, Bali, October 24-25, 2007
47. Setiawan, J.D., Subchan, M. and **Budiyono, A.***, Virtual Reality Simulation of Fire*

Fighting Robot Dynamic and Motion. International Conference on Intelligent Unmanned System, ICIUS, Bali, October 24-25, 2007

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49. H.Y Sutarto, **Agus Budiyono**, Endro Joelianto and Go Tiauw Hiong, *Switched Linear Control of a Model Helicopter*, International Conference on Control, Automation, Robotics and Vision, Singapore, 5-8 December 2006
50. **Budiyono, A**. and Sutarto, H.Y.*, Linear Parameter Varying Model Identification for Control of Rotorcraft-based UAV,* Fifth Indonesia-Taiwan Workshop on Aeronautical Science, Technology and Industry, Tainan, Taiwan, November 13-16, 2006
51. Muljowidodo and **Budiyono, A**. , *Design and Development of Micro Aerial Vehicle at ITB,.* International Conference on Technology Fusion, Seoul, Korea, 17-19 May 2006
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53. Lutfi, M., **Budiyono, A**. and Sutarto, H.Y., *Hybrid Simulation For Safety Investigation Of Embedded Control Yamaha R-50 Helicopter Flight Control System.* The National Conference on Power and Mechatronics, Bandung, Indonesia, 21 July 2006
54. Muljowidodo, **Budiyono, A**. and Kurniantoro, *Development of VTOL-UAV,* International Conference on Production and Manufacturing, Kuala Lumpur, Malaysia, March 2006
55. **Budiyono, A**. and Hadi, B.K., *Academic Vision of the Department of Aeronautics and Astronautics ITB: Towards Achieving Top-class Institution in Asia Pacific in 2010,* Paper presented at Regional Conference on Engineering Education, Johor, Malaysia, 12-13 December 2005
56. **Budiyono, A**., Wibowo, S.S. and Setiawan, J.D., *Flight Simulation for the Aircraft Accident Reconstruction and Failure Modes Analysis,* Paper presented at the National Seminar on Air Transportation, Semarang, Indonesia, 1 October 2005
57. Nasution, S.H, **Budiyono, A**. and Jenie, S.D., *GPS-based Altitude and Flight Path Holding System for an Unmanned Aerial Vehicle.* Paper presented at the Aerospace Science and Technology Seminar (Siptekgan), Jakarta, Indonesia, 21 September 2005
58. Sutarto, H.Y, **Budiyono, A**. and Wibowo, S.S., *LQG Optimal Tracking Control for Model Helicopter.* Paper presented at the Aerospace Science and Technology Seminar (Siptekgan), Jakarta, Indonesia, 21 September 2005
59. **Budiyono, A**., Sudiyanto, T. and Sutarto, H.Y., *Evaluation of Low Cost GPS Application for an Autonomous Helicopter in the Presence of Kalman Filter.* Paper in review, Jurnal Antariksa Nasional.
60. Mulyadi, J, Jenie, S.D. and **Budiyono, A**., *Modeling and Simulation of Prolate Dual-Spin Satellite Dynamics in an Inclined Elliptical Orbit: Case Study of Palapa B2R Satellite.* Paper presented at the Aerospace Science and Technology Seminar (Siptekgan), Jakarta, Indonesia, 21 September 2005
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62. **Budiyono, A**.*, Design and Development of Autonomous Uninhabited Air Vehicles at ITB: Challenges and Progress Status.* Paper presented at the Aerospace Indonesia Meeting, Bandung, Indonesia 27 July 2005
63. Sudiyanto, T., **Budiyono, A**. and Sutarto, H.Y., *Hardware In-the-Loop Simulation for Control System Designs of Model Helicopter.* Paper presented at the Aerospace Indonesia Meeting, Bandung, Indonesia 27 July 2005

64. **Budiyono, A.***, Onboard Multivariable Controller Design for a Small Scale Helicopter Using Coefficient Diagram Method.* International Conference on Emerging System Technology, Seoul, Korea 19-20 May 2005
65. **Budiyono, A**. and Sutarto, H.Y.*, Controller Design of a VTOL Aircraft: A Case Study of Coefficient Diagram Method to a Time-varying System.* Paper presented at the Regional Conference on Aeronautical Science, Technology and Industry, Bandung, Indonesia, 18-19 May 2004
66. Indriyatmoko, A., Jenie, S.D., Madani, I. and **Budiyono, A**. *, Design and Implementation of Landing Guidance Program with Tunnel In the Sky based on GPS*, Paper presented at the Fourth Indonesia-Taiwan Workshop on Aeronautical Science, Technology and Industry, Bandung, Indonesia, 18-19 May 2004
67. **Budiyono, A**, Haldeman, C.H. and Valbert, J*, Effects of Supercritical Water/Fuel Mixtures on Diesel Engine Efficiency*, Paper presented at the ASME Internal Combustion Engine Division Meeting, New Orleans, 8-11 September 2002

Teaching Experience

- PN 3231 System Dynamics
- PN 5133 Inertial Engineering
- PN 4131 Flight Control System
- PN 5032 Automatic Flight Control System
- PN 6131 Principles of Optimal Control
- Mechanics of Materials
- UAV Systems 1 (Modeling)
- UAV Systems 2 (Control)
- Advanced Engineering Mathematics

Lecture Notes/Books/ Chapters

- Sivaramakrishnan, R., Rathinasamy, D., **Budiyono, A**., & Dugki, M. (2024). Toward Future Transportation: History, Adoption, Research, and Development, Challenges in Urban Aerial Mobility. *Urban Air Mobility: Intelligent, Safe and Sustainable Systems for Future Transportation, 1*
- Kenzo Nonami, Muljowidodo Kartidjo, Kwang-Joon Yoon and Agus Budiyono (Eds), Autonomous Control System and Vehicles. Intelligent Unmanned System, Springer Verlag, April, 2013
- Bhaskar Prasad Rimal, Idris E. Putro, Agus Budiyono, Dugki Min and Eunmi Choi (2011). System Identification of NN-based Model Reference Control of RUAV during Hover, Artificial Neural Networks - Industrial and Control Engineering Applications, Prof. Kenji Suzuki (Ed.), ISBN: 978-953-307-220-3
- Budiyono, A., Bambang, R and Joelianto, E. (Eds), Intelligent Unmanned Systems: Theory and Applications. Studies in Computational Intelligence (SCI) series, Springer-Verlag, April, 2009
- Budiyono, A., Sudiyanto, T. and Lesmana, H., Global Linear Modeling of Small Scale Helicopter . In Intelligent Unmanned Systems: Theory and Applications. Studies in Computational Intelligence (SCI) series, Springer-Verlag, April, 2009
- Budiyono, A. and Sudiyanto, T., Control of Small Scale Helicopter using s-CDM and LQ Design. In Intelligent Unmanned Systems: Theory and Applications. Studies in Computational Intelligence (SCI) series, Springer-Verlag, April, 2009
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- Modeling and Control of Rotorcraft-based Unmanned Aerial Vehicles, 2009. Book in preparation
- Automatic Flight Control System: Classical approach and modern control perspective, Lecture Notes, Graduate Course in Aeronautics and Astronautics, ITB, 2006 (with Said D. Jenie)
- Principle of Optimal Control, Lecture Notes, Graduate Course in Aeronautics and Astronautics, ITB, 2005

Thesis Supervision/ Examination (partial list)

- Tata Sudiyanto, Consensus-based Cooperative Control System for a Team of Quadrotors, ongoing PhD research, Institut Teknologi Bandung, 2021
- Au Thi Kim Loan, Control System Design of Insect-mimicking Flapping Wing Systems, ongoing PhD research, Konkuk Univ, Korea, 2016
- Indra Hartarto Tambunan, Control System Design for Flapping-type Tidal Turbine, PhD thesis, Konkuk University, Korea, 2015
- Gigun Lee, Design of a Small Scale Multi-Stage Tilt Multi-Rotor Aircraft and Autonomous Control System Development, PhD thesis, Konkuk University, Korea, 2014
- Ismaila Tijani, Multi Objective Differential Evolution H_∞Controller For Autonomous Helicopter, PhD thesis, International Islamic University, Malaysia, 2013
- Au Thi Kim Loan, Dynamic Stability of Vertically Flying Insect-mimicking Flapping Wing Systems, MS thesis, Konkuk Univ, Korea, 2013
- Kim, Gyou Beom, Design and Verification of Unmanned Air Vehicle System based on Multi-rotor, PhD thesis, Konkuk Univ, Korea, 2013
- Vishnu Kumar, RICA: Reconfigurable Intelligent Control Architecture for Multiple Small Scale Unmanned Helicopters, PhD Thesis, Konkuk Univ, Korea, 2012
- Dharmayanda, Hardian Reza, Modeling and control of miniature helicopter, PhD-thesis, Konkuk Univ, Korea, 2010
- Putro, Idris Eko, Identification modeling of small scale helicopter, MS thesis, Konkuk Univ, Korea, 2010
- Lesmana, H., Control of small scale helicopter during vertical flight and hover, 2007
- Rahmat, H., Modeling and control of rocket, 2007
- Finley, Implementation of PID based on fuzzy logic for the control of autonomousaerial vehicle, 2007
- Firmansyah, S., Control of VTOL aircraft, 2007
- Sony, Altitude holding system for an unmanned aerial vehicle, 2007
- Rahmansyah, A., Flight path holding system for unmanned aerial vehicle, 2007
- Lutfi, M., The simulation of helicopter hybrid model, 2006
- Yuniorita, S., Interplanetary orbital trajectory design using *Multiple-Fly-By (Case study: Galileo Mission on Jupiter),* 2005
- Nasution, S.H., GPS-based altitude-hold and trajectory-hold automatic control system design for unmanned aerial vehicle, 2005
- Muliadi, J., Attitude control system design of *dual-spin* satellite on the inclined elliptical orbit *(Case study: Palapa B2R satellite)*, 2005
- Sudiyanto, T., Hardware-in-the-loop simulation for a model helicopter, 2005
- Kuncoro, A., The design of satellite control using classical approach (*Case study: Cakrawarta-1 satellite),* 2005
- Indriyatmoko, A., A preliminary design and implementation of *Tunnel in the Sky* GPS-based guidance program *(Case study of Husein Sastranegara Airport, Bandung)*, 2004
- Ariyanto, I., Longitudinal and lateral-directional automatic control system design for UAV, 2004
- Sembiring, J., Longitudinal and lateral-directional automatic control system design for *Wing In-Ground Effect* Aircraft, 2004

Talks/ Lectures

- Intelligent Oceans: Unmanned Marine Vehicles and Their Role in Shaping Maritime Futures, Keynote Speech, 9th Intelligent Traffic and Transportation conference, Amsterdam, 8-10 September 2025, Netherlands
- Advances in Unmanned Aerial Vehicle Technologies, Keynote Speech, 18th International Conference of Intelligent Unmanned System (ICIUS2022), Tokushima, Japan, August 9- 11, 2022
- Digital Transformation in Education, National Seminar on Next Generation Learning, Bandung, 10 September 2020, Indonesia
- Building Robotics Industry in Indonesia, Keynote Speech, The 2019 International Conference on Mechatronics, Robotics, and Systems Engineering (MoRSE Conference 2019), Hotel Harris Seminyak, Bali pada 4-6 Desember 2019
- Towards Self-Reliance in the Defense Industry, Keynote Speech, 5th Annual Engineering Seminar, Faculty of Engineering, Gadjah Mada University, Jogjakarta, Indonesia, February 12, 2015
- Contribution to the Defense Offset Program: Private sector perspective, Invited Talk, Indo Defense Seminar, Jakarta, Indonesia, November 5-8, 2014
- Starting Journal and Center in Robotics, Seminar on Unmanned System, University of Gadjah Mada, Jogjakarta, Indonesia, August 12, 2013
- RUAV Modeling and Control-Progress Status, 11th International Workshop on Smart Flying Robots, Institut Teknologi Bandung, Bandung, Indonesia, July 9-11, 2012
- Recent Progress on UAV Modeling and Control, Seminar on Unmanned Flying System, Department of Mechanical Engineering, IIUM, Kuala Lumpur, Malaysia, February 16-17, 2012
- Collision Avoidance System and Multi-RUAVs Control Algorithm, 3rd Workshop on Mathematical Engineering, Faculty of Natural Sciences, University of Gadjah Mada, Jogjakarta, Indonesia, August 15-16, 2011
- Collision Avoidance System and Multi-RUAVs Control Algorithm, Invited Talk, Department of Mechanical Engineering, Diponegoro University, Semarang, Indonesia, August 11, 2011
- Recent progress on the control of RUAVs, International Workshop on Smart Flying Robots, Institut Teknologi Bandung, Bandung, Indonesia, July 25-27, 2011
- Collision Avoidance System for Multi-UAVs, 7th Workshop on Smart Flying Robots, Institut Teknologi Bandung, Bandung, Indonesia, January 26-28, 2011
- Recent Advances in Unmanned Vehicle Technologies, 5th Workshop on Smart Flying Robots, Institut Teknologi Bandung, Bandung, Indonesia, February 2-3, 2010
- Autonomous Unmanned Vehicle and Hybrid Control System, Invited Talk, Department of Mechanical Engineering, Diponegoro University, Semarang, Indonesia, January 27, 2010
- Modeling of Rotorcraft-based Unmanned Aerial Vehicle Dynamics, 2nd Workshop on Mathematical Engineering, Faculty of Natural Sciences, University of Gadjah Mada, Jogjakarta, Indonesia, January 12-13, 2010
- Advances in unmanned aerial vehicles technologies, Keynote Speech, International Symposium on Intelligent Unmanned System, NUAA, Nanjing, China, October 15, 2008
- Hybrid system modeling and control for aerospace vehicles, Invited Lecture, Workshop on Hybrid Control and Its Applications, School of Mathematics and Natural Sciences, Gajah Mada University, Jogjakarta, Indonesia, January 28-29, 2008
- Modeling and control of a small scale helicopter, Invited Talk, Department of Aerospace Information System, Konkuk University, Seoul, Korea, December 27, 2007
- Recent Progress in the Research on Unmanned Underwater Vehicles at ITB, Keynote

Speech, Workshop on Underwater System Technology, Kuala Lumpur, Malaysia, December 11-12, 2007

- Recent Advances in Control and Instrumentation of Unmanned Aerial Vehicles, Invited Talk, Department of Engineering Physics, ITB, Indonesia, February 19, 2007
- Introduction to Intellectual Property Rights, Invited Lecture, Institut Tunas Harapan Bangsa (ITHB), Bandung, Indonesia, January 12, 2007
- Intellectual Property Rights for Research Communities: An Introduction, Invited Lecture, Indonesian Air Force Research and Development Center, Bandung, Indonesia, August 23, 2006
- Design, Development and Testing of Underwater Vehicles: ITB Experience, Keynote speech, The International Conference on Underwater System Technology: Theory and Application, Penang, Malaysia, 18-21 July 2006
- Flight Dynamics and Control of UAV, Invited Talk, Department of Aerospace Information System, Konkuk University, Seoul, Korea, May 20, 2006
- Automatic Flight Control System: Design and Analysis for N250-100, Invited Talk, Department of Mechanical Engineering, International Islamic University, Kuala Lumpur, Malaysia, January 13, 2006
- Flight Dynamics and Control, Lecture for Graduate Program in Aerospace Engineering, MIAT, Kuala Lumpur, Malaysia, December 19, 2005 - January 14, 2006
- Introduction to Aeronautics and Astronautics, Lecture for Graduate Program in Aerospace Engineering, MIAT, Kuala Lumpur, Malaysia, October 11-14, 2004
- Operational Practices for Fuel Conservation, Strategy Development for Fuel Conservation Workshop, Institute of Technology Bandung, June 1-2, 2004

Professional Activities

- *Editor,* Multidisciplinary Review, **Scopus-indexed** journal. Malque Publishing, Since December, 2025
- *Steering Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2026), Coimbatore, India, November 26-27, 2026
- *General Chair,* International Conference on Intelligent Unmanned System (ICIUS2025), Jimbaran, Bali, Indonesia, August 22-23, 2025
- *President,* International Society on Intelligent Unmanned System (ISIUS), 2024 - Now
- *General Chair,* International Conference on Intelligent Unmanned System (ICIUS2024), Bandung, Indonesia, August 23-24, 2024
- *Steering Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2023), Adelaide, Australia August, 2023
- *Steering Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2022), Tokushima, Japan, August, 2022
- *Steering Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2021), Ho Ci Minh City, Vietnam, August, 2021
- *International Advisory Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2019), Beijing, China, August, 2019
- *International Advisory Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2018), Jeju Island, South Korea, September, 2018
- *Steering Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2017), Tamsui, Taiwan, August, 2017
- *Co-Chairman,* 11-th International Conference on Intelligent Unmanned System, Bali, Indonesia, August 26-29, 2015
- *International Advisory Committee Member,* 10-th International Conference on Intelligent Unmanned System, Montreal, Canada, September 29- October 1, 2014
- *Editor-in-chief*, Journal of Unmanned System Technology (JUST), UNSYSdigital, Korea, since 2013
- *International Advisory Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2013), Jaipur, India, September, 2013
- *Editor-in-chief*, International Journal of Intelligent Unmanned System (IJIUS),

Emerald Publishing, UK, since 2012

- *International Advisory Committee Member,* International Conference on Intelligent Unmanned System (ICIUS2012), Singapore, November, 2012
- *Editor*, International Journal of Imaging and Robotics (IJIR), since 2011
- *Associate Editor*, International Journal of Artificial Intelligent (IJAI), since 2011
- *Secretary General,* International Society on Intelligent Unmanned System, www.isiusys.org
- *Guest Editor-in-chief*, Journal of Aerospace Engineering (JAE), 2011
- *Guest Editor-in-chief*, International Journal of Artificial Intelligent (IJAE), 2011
- *Program Chairman,* International Conference on Intelligent Unmanned System, Bali, Indonesia, November 3-5, 2010
- *Guest Editor-in-chief*, Indian Journal of Marine Sciences (IJMS), 2009, 38 (3)
- *Program Chairman,* International Symposium on Intelligent Unmanned System, Jeju Island, Korea, June 2009
- *International Advisory Committee Member,* International Conference on Underwater System Technology: Theory and Application USYS08, Bali, Indonesia, November 4-6, 2008
- *International Advisory Committee Member,* International Symposium on Intelligent Unmanned System ISIUS2008 , Nanjing, China, October 14-18, 2008
- *Session Chairman, 5th* International Symposium of Nano Manufacturing, ISNM5, Singapore, January 23-25, 2008
- *Guest Editor,* Journal of Bionic Engineering, 2007, 04 (04)
- *Program Chairman,* International Conference on Intelligent Unmanned System, Bali, Indonesia, October 17-18, 2007
- *Session Chairman,* Fifth Indonesia-Taiwan Workshop on Aeronautical Science, Technology and Industry, Tainan, Taiwan, November 13-16, 2006
- *Program Chairman*, Seminar on Education Improvement Program in the Department of Aeronautics and Astronautics at ITB , Bandung, Indonesia, July 27, 2006
- *Session Chairman*, International Conference on Technology Fusion, Seoul, Korea 19-20 May 2006
- *Member*, Society of Industrial and Applied Mathematics, USA
- *Session Chairman*, Regional Conference on Aeronautical Science, Technology and Industry, Bandung, Indonesia, May 18-19, 2004

Entrepreneurship/Consulting Activities

- Bhimasena Research, Technology and Development
- Parametric Solusi Integrasi, Computer Aided Engineering
- Techtra Technologies Pte., Singapore
- GDP International
- Robo Aero Industry

Honors

- Listed in the Who is Who in Science and Engineering, 2011-2012
- Listed in the Who is Who in the World, 2010-2011
- Best Paper Award, International Symposium on Intelligent Unmanned System, Jeju Island, Korea, June 2009
- Best Paper Award, International Conference on Underwater System Technology: Theory and Applications 2008 (USYS'08), Bali, Indonesia, November 2008
- Best Paper Award (2nd place), International Symposium on Intelligent Unmanned System, Nanjing, China, October 2008
- Best poster presentation, International Conference on Intelligent Unmanned System, Bali, Indonesia, October 2007
- Best patent draft 3rd, Seminar and Workshop on Intellectual Property Rights,

European Patent Office-DGPR-RI, November 2005

- Best paper presentation, Aerospace Science and Technology Seminar (Siptekgan), September 2005
- Outstanding Tutor Award, Office of Minority Education, Massachusetts Institute of Technology, 1999
- Outstanding Tutor Award, Office of Minority Education, Massachusetts Institute of Technology, 1998
- Graduate Program Fellowships, Indonesian Aircraft Industries Ltd., 1995- 1999
- Best Graduate V Award, Mechanical Engineering Department, Bandung Institute of Technology, 1992

References

- **Mahmoud Shafik, BEng. (Hons) MSc MPhil PhD CEng FHEA MIET MASME**
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