

Curriculum Vitae

Personal Information

Name: Chutipphon Pukdeboon
Nationality: Thai
Date of Birth: Jun. 8, 1975.
Current Work: Associate Professor, Mathematics Dept.,
Faculty of Applied Science,
King Mongkok's University of Technology North Bangkok

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Education

Bachelor: B. Eng. Electrical Engineering, Kasetsart University,
Bangkok, Thailand. (1997)

Master: M Sc. Computational Sciences, Chulalongkorn University,
Bangkok, Thailand. (2002)

Doctorate: Ph.D. Applied Mathematics, University of Sheffield,
Sheffield, England. (2010)

Dissertation Adviser: Professor Alan Zinober
Dissertation Title: Optimal Higher-Order Sliding Mode Controller Designs
for Spacecraft Attitude Manoeuvres

Employment History

2016– Current

Associate Professor in Mathematics Dept., Faculty of Applied Science,
King Mongkok's University of Technology North Bangkok

2012– 2015

Assistant Professor in Mathematics Dept., Faculty of Applied Science,

King Mongkok's University of Technology North Bangkok

2003 – 2009 and 2010 – 2012

Demonstrator in Mathematics Dept., Faculty of Applied Science,
King Mongkok's University of Technology North Bangkok

Teaching Experience

Courses: Master Degree in Applied Mathematics

- Mathematical Modeling
- Mathematics of Control Systems

Courses: Bachelor Degree in Applied Mathematics

- Calculus of Variations
- Optimization Techniques
- Discrete Mathematics and Applications
- Ordinary Differential Equations

Attended Conferences

1. The 18th IEEE International Conference on Control Applications Part of 2009 IEEE Multi-conference on Systems and Control, Saint Petersburg, Russia, July 8-10, 2009.
2. The 6th International Federation of Automatic Control. 6th IFAC Symposium on Robust Control Design, June 16-18, Haifa, 2009.
3. The 8th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON), Khon Kaen, Thailand, 17-19 May 2011
4. The 7th IMT-GT International Conference on Mathematics, Statistics and its Applications (ICMSA 2011), Bangkok, Thailand, 21-13 July 2011.
5. The 9th International Conference on Nonlinear Analysis and Convex Analysis (NACA 2015), Chiang Rai, Thailand, 21-25 January 2015.

Referee to Journals

IEEE Transactions on Industrial Electronics,

IET Control Theory and Applications,

International Journal of Robust and Nonlinear Control,

Journal of Franklin institute and applied mathematics,

ISA Transactions,

International Journal of Control,

Advances in Space Research,

Aerospace Science and Technology,

Acta Astronautica,

Asian Journal of Control,

International Journal of Control, Automation and Systems,

Mathematical Problems in Engineering

Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering.

Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering

Conferences Papers

1. Pukdeboon, C., Zinober, A.S.I., “Optimal sliding mode controllers for attitude tracking of spacecraft”, 18th IEEE International Conference on Control Applications Part of 2009 IEEE Multi-conference on Systems and Control, Saint Petersburg, Russia, July 8-10, 2009.
 2. Pukdeboon, C. and Zinober, A.S.I. (2009) *Optimal sliding mode controllers for spacecraft attitude manoeuvres*. In: Proceedings of the 6th International Federation of Automatic Control. 6th IFAC Symposium on Robust Control Design, June 16-18, , Haifa, 2009.
 3. Pukdeboon, C. Dynamic output feedback sliding mode control for spacecraft attitude manoeuvres, In: Proceedings of the 8th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON), Khon Kaen, Thailand, 17-19 May 2011, pp. 545-548.
 4. Pukdeboon, C. Optimal Sliding Mode Control for Spacecraft Approaching a Tumbling Target, In: Proceedings of the 7th IMT-GT International Conference on Mathematics, Statistics and its Applications (ICMSA 2011), Bangkok, Thailand, 21-23 July 2011, pp. 346-358.
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Published Books (in Thai)

- ❖ Real Analysis, 2015
- ❖ Discrete Mathematics, 2015,

Fundings Sources

1. TRF Grant for New Researcher: 2 June 2014 –1 June 2016
 2. Full PhD Scholarship in Applied Mathematics (Optimization) under the programme ‘Higher Educational Strategic Scholarships for Frontier Research Networks of Thailand’, Commission on Higher Education, Royal Thai Government: October 2006 - February 2010:
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Some of the Publications

1. Pukdeboon, C., Zinober, A.S.I. and Thein, M.-W. L., “Quasi-continuous higher-order sliding mode controllers for spacecraft attitude tracking manoeuvres”, *IEEE Transactions on Industrial Electronics* 2010; 57(4):1436-1444 (2015 Impact factor 6.383)
2. Pukdeboon, C, “Optimal sliding mode controllers for attitude stabilization of flexible spacecraft”, *Mathematical Problems in Engineering*, Article Number: 863092, DOI: 10.1155/2011/863092 Published: 2011. (2015 Impact factor 0.644)
3. Pukdeboon, C, Zinober, A.S.I., “Control Lyapunov function optimal sliding mode controllers for attitude tracking of spacecraft”, *Journal of Franklin institute and applied mathematics*, 2012; 349(2):456-475 (2014 Impact factor 2.327)
4. Pukdeboon, C, “Finite-Time Second-Order Sliding Mode Controllers for Spacecraft Attitude Tracking,” *Mathematical Problems in Engineering*, Article Number:930269, Published: 2013. (2014 Impact factor 0.644)
5. Pukdeboon, C, “Optimal Output feedback controllers for spacecraft attitude tracking ”, *Asian Journal of Control*, vol. 15, no.5, pp. 530-540, 2013. (2014 Impact factor 1.407)
6. Pukdeboon, C, Jitpattanakul, A. “Finite-time anti-disturbance inverse optimal attitude tracking of flexible spacecraft,” *Mathematical Problems in Engineering*, Article Number:967574, Published: 2013. (2014 Impact factor 0.644)

7. Pukdeboon, C, and Siricharuanun, P. "Nonsingular terminal sliding mode based finite-time control for spacecraft attitude tracking," *International Journal of Control, Automation and Systems*, vol. 12, no.3, pp. 530-540, 2014. (2015 Impact factor 1.219)
8. Pukdeboon, C, "Adaptive-gain second-order sliding mode control of attitude tracking of flexible spacecraft," *Mathematical Problems in Engineering*, Article Number:312494, Published: 2014. (2015 Impact factor 0.644)
9. Pukdeboon, C, and Kumam, P. "Robust optimal sliding mode control for spacecraft position and attitude maneuvers," *Aerospace Science and Technology*, vol. 43, pp. 329-342, 2015. (2015 Impact factor 1.751)
10. Pukdeboon, C, "Inverse optimal sliding mode control of spacecraft with coupled translation and attitude dynamics," *International Journal of Systems Science*, vol. 46, no.13, pp. 2421-2438, 2015. (2015 Impact factor 1.947)
11. Pukdeboon, C, "Adaptive backstepping finite-time sliding mode control of spacecraft attitude tracking," *Journal of Systems Engineering and Electronics*, vol. 26, no.4, pp. 826-839, 2015. (2015 Impact factor 0.468)
12. Pukdeboon, C, "Output feedback second order sliding mode control of spacecraft attitude and translation motion," *International Journal of Control, Automation and Systems*, vol. 14, no.2, pp. 411-424, 2016. (2015 Impact factor 1.219)
13. Pukdeboon, C, "Inverse optimal attitude stabilization of flexible spacecraft with actuator saturation," *International Journal of Aerospace Engineering*, Article ID 1395952, pp. 1-15, 2016. (2015 Impact factor 0.889)
14. Pukdeboon, C, "Anti-disturbance inverse optimal control for spacecraft position and attitude maneuvers with input saturation," *Advances in Mechanical Engineering*, vol. 8, no.5, pp.1-14, 2016. (2015 Impact factor 0.640)