

Benchawan Wiwatanapataphee

Associate Professor, PhD

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GITHUB PROFILE	https://ben-wiwat.github.io

HIGHEST ACADEMIC DEGREE	1998	Ph.D. in Applied Mathematics Curtin University
	Dissertation:	Mathematical modeling of fluid flow and heat transfer in the continuous steel casting

EMPLOYMENT HISTORY	2015 – Now	Associate Professor Mathematics and Statistics School of Electrical Engineering, Computing, and Mathematical Science Curtin University
	2014 – 2011	Professor Department of Mathematics – Mahidol University
	2000 – 2011	Associate Professor Department of Mathematics – Mahidol University
	1998 – 2000	Assistant Professor Department of Mathematics – Mahidol University

THAI ROYAL ORDERS AND DECORATIONS	Oct 2019	Chakrabarti Mala Medal - Medal for Long Service and Good Conduct (Civil)
	Dec 2010	Knight Grand Cross (First Class) of the Most Exalted Order of the White Elephant
	Dec 2007	Knight Grand Cross (First Class) of the Most Noble Order of the Crown of Thailand
	Dec 2004	Knight Commander (Second Class) of the Most Exalted Order of the White Elephant

PRIZES, HONOURS AND AWARDS	2022	Prize of THB 20,000 for the patent "Computer model of the coronary system with and with no bypass grafts," awarded for outstanding innovation and contributions to the field of Biomedical Engineering from Mahidol University
	2016	Prize of THB100,000 for the most cited Mathematics articles - Scopus from 2010 to 2016 from Mahidol University
	2010	Prize of THB100,000 for the best research in Applied Mathematics from Mahidol University
	2007	Prize of THB 100,000 for the Best Research in Mathematical Sciences for the seminal research on "Mathematical Modelling of Blood flow in the Coronary Artery Bypass Graft" from the National Research Council of Thailand
	2007	Prize of AUD25,000 for the Australia Endeavour Research Fellowship from the Ministry of Education, Australia
	2005	Prize of AUD25,000 for the Australia Endeavour Cheung Kong Award from the Ministry of Education, Australia
	1999	Prize of THB 100,000 for the Third World Academy of Science Award for Young Scientists in Thailand in the field of Mathematical Sciences from the National Research Council THAILAND (NRCT) and the third World Academy of Sciences (TWAS)

RESEARCH GRANTS

2018 - 2021	2.56ARC Improving Road Network Operations under Non-recurrent Events (LP170100341), AUD228,000	Australian Research Council (ARC)
2012 - 2014	Leap research grant for the project entitled "Optimal control of disease transmission in Thailand", THB2,400,000	Faculty of Science, Mahidol University
2012 - 2014	Research grant (RG-1-53-09-2) for the project entitled "Spreading Dynamics of Epidemic Model on Adaptive Social Network", THB1,600,000	Centre Excellent in Mathematics, CHE, Ministry of Education
2008 - 2011	Empowering research grant (RMU5080070) for university lecturers for the project entitled "Modelling of Blood Flow and Drug Delivery through the Stenosed Coronary Artery with Magnetic Field", THB1,060,000	Commission on Higher Education (CHE), Ministry of Education & Thailand Research Fund
2006 - 2008	Focused research grant (MATH-MU-2549) for the project entitled "Optimal Control and Design of Coronary Arterial Bypass", THB 1,301,100	Faculty of Science, Mahidol University, Bangkok, Thailand
2007 - 2011	Research grant (PHD/0148/2548) for the project entitled "Simulation and Analysis of Blood Flow in Tumour-Induced Coronary Artery and Capillary Networks" THB 2,152,000	Thailand Research Fund: The Royal Golden Jubilee Ph.D. Program
2008 - 2012	Research grant (PHD/0212/2549) for the project entitled "Mathematical model for fluid flow and heat transfer in continuous casting process" THB 1,195,000	Thailand Research Fund: The Royal Golden Jubilee Ph.D. Program
2002 - 2004	Research grant (MT-B-45-MET-14-102-G) for the project entitled "Computational Techniques for Heat Transfer and Solidification in the Continuous Casting Machine", THB 1,363,560	MTEC National Science and Technology Development Agency, Thailand
2001 - 2002	Research grant (MT-S-42-MET-14-078-G) for the project entitled "Modelling Investigation and Control of the Formation of Oscillation Marks in the Continuous Casting of Steel", THB 200,000	MTEC National Science and Technology Development Agency, Thailand

LEADERSHIP EXPERIENCE

2017 - Now	Deputy to the Postgraduate Course Coordinator in Mathematics and Statistics, Curtin University, responsible for the master programs including MSc (Math Sci) and MSc (IE). The MSc (IE) was ranked top 7 in the field of Industrial and Operations Management in the 2023 Eduniversal Best Masters Ranking
2017 - Now	Coordinator for the Mahidol - Curtin articulation Program
2019 - Now	Project Manager for the ARC linkage project LP170100341 responsible for assisting the project leader with quarterly research reports and organizing quarterly meetings with industrial partners (MRWA and Roads and Maritime Services NSW)
2012 - 2014	Member of the Academic Promotion Committee for the Thailand Higher Education Commission (OHEC), MOE, Thailand
2005 - 2012	Deputy Head of the Department of Mathematics, Mahidol University
2000 - 2004	PhD Program Chair, Department of Mathematics, Mahidol University
2004 - 2008	Member of the University Research Grant Committee, Mahidol University
2012 - 2014	Member of the Faculty of Science Screening Committee for Academic Promotion, Mahidol University
2000 - 2014	Evaluation Committee for Staff Performance, Department of Mathematics and Statistics, Mahidol University

RESEARCH INTEREST

- Applied and Computational Mathematics
 - Modelling and Optimisation in Industrial Management
 - Approximation theory and asymptotic methods
 - Numerical solution of differential and integral equations
 - Computational Finance
 - Computational Statistics and Data Analysis
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TEACHING EXPERIENCES

- **Curriculum Development**
 - Strategic development of the [BSc \(Financial Mathematics\)](#) course at Curtin University, which now attracts many international students and has led to the establishment of several articulation agreements with Universities in China.
 - Strategic establishment of the [BSc \(Actuarial Science\)](#) program at Mahidol University as the then Deputy Department Head. Currently, the program attracts over 50 students each year, and some of them will complete their final three semesters of study at Curtin based on a Curtin-Mahidol agreement.
 - **UG and PG units taught or coordinated at Curtin University**
 - Computational Mathematics (UG)
 - Industrial Engineering Project (UG)
 - Applied Mathematical Modelling (UG) and Applied Mathematics Topics (PG)
 - Advanced Numerical Analysis (PG)
 - Supply Chain Modelling and optimisation (UG and PG)
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OTHER PROFESSIONAL AND ACADEMIC SERVICES

- **Grant Assessment**
 - The Australian Research Council (ARC)
 - Thailand Research Funds (TRF)
 - National Science and Technology Development Agency (NSTDA)
 - National Research Council of Thailand (NRCT)
 - **Journal Editing**
 - A Special Issue of the International Journal of Differential Equations (Current)
 - Cogent Mathematics (Comp. Sci. section)
 - A Special Issue of Mathematical Problems in Engineering
 - Abstract and Applied Analysis special issue: Nonlinear Functional Analysis of Complex Boundary Value Problems
 - A Special Issue of Dynamics of Discrete, Continuous and Impulsive System B
 - **Journal Review Service**
 - Computer and Mathematics with Application
 - Nonlinear Analysis - Theory Methods and Applications
 - Advances in Differential Equations, Applied Mathematical Modelling
 - The Songklanakarin Journal of Science and Technology
 - Meccanica (MECC)
 - Applied Bionics and Biomechanics
 - Mathematical Biosciences and Engineering (MBE)
 - **PhD Thesis Examination**
 - BASR University Of Karachi, Pakistan
 - Visvesvaraya Technological University, Karnataka state, India
 - Mahidol University, Thailand
 - Chulalongkorn University, Thailand
 - Silpakorn University, Thailand
 - Thammasat University, Thailand
 - King Mongkote Institute, Thailand
 - Suranaree University of Technology
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PROJECT & DISSERTATION SUPERVISION STATS¹	Current	Graduated	At Curtin, I have supervised students for the following units: <ul style="list-style-type: none"> • Industrial Project and Industrial Engineering Masters Project • Mathematics Masters Project 1, 2, and 3 • Actuarial Science Honours Dissertation 1 and 2 • Advanced Science Capstone
	PhD 4	35	
	PG 0	23	
	UG 0	28	
CURRENT PHD STUDENTS	2024 – Zhaohua Gong	Supervisor	
	2023 – Shaofan Yao	Co-supervisor	
	2022 – Afnan Almuhaysh	Co-supervisor	
	2021 – Liyuan Zhang	Co-supervisor	
GRADUATED PHD STUDENTS (CURTIN)	2023 Amani Ahmed Otaif	Jazan University	
	Fahad Aljuaydi	Prince Sattam Bin Abdulaziz University	
	Bashiruddin Nabubie	University of Mines and Technology, Ghana	
	2022 ChuanYe Gu	Guangzhou University	
	Yu Yang	University of Electronic Science and Technology of China	
	Rui Li	University of Electronic Science and Technology of China	
	2020 Na Wei	Zhongnan University of Economics and Law, China	
	Nan Li	Southwestern University of Finance and Economics	
	2019 Shican Liu	Zhongnan University of Economics and Law, China	
GRADUATED PHD STUDENTS (MAHIDOL)	Muhammad Kamran	Deakin College, Australia	
	2018 Yongsheng Jiang	Zhongnan University of Economics and Law, China	
	2017 Phang Piau	Universiti Malaysia Sarawak	
	Elayaraja Aruchunan	The University of Malaya and Industrial Consultancy	
	2018 Mongkol Kaewbumrung	Rajamangala University Ayutthaya	
	Din Prathumwan	Khon Kean University, Thailand	
	2017 Pearnat Chuchard	Ramkamhang University, Thailand	
	Kamonchat Trachoo	Maharakham University, Thailand	
	Akapak Charoenloedmongkhon	King Mongkut's University of Technology North Bangkok	
	Benjamas Chimmalee	Sisaket Rajabhat University, Thailand	
	2015 Angkhana Prommarat	Government Big Data Institute – GBDi	
	2012 Ujjwal KumarDeb	University of Chittagong, Bangladesh	
	Burasakorn Nuntadilok	Maejo University, Thailand	
	2011 Suthiwat Tongnak	Thaksin University, Thailand	
	2010 Theeradech Mookum	Mae Fah Luang University, Thailand	
	Warium Chuayjan	Thaksin University, Thailand	
	2009 M.M. Touhid Hossain	Khulna University of Engineering & Technology	
	Wanika Jumpen Sawangtong	Mahidol University, Thailand	
	Sakda Noinang	Ubon Ratchathani University, Thailand	
	Phattharawadee Hadkaew	IPST, Thailand	
	2008 Supachara Kongnuan	Thammasat University, Thailand	
	Daungkamon Poltems	Burapha University, Thailand	
	Sineenard Srimongkol	Burapha University, Thailand	
	Permyos Ruengsakulrach	Bangkok Hospital, Thailand	
	2004 Jutathip Achapitak Sillabutra	Mahidol University, Thailand	
	Bundit Unyong	Phuket Rajabhat University, Thailand	

¹ For a more comprehensive supervision list, please visit <https://ben-wiwat.github.io/supervision.html>

**INVITED/KEY
SPEAKER FOR
INTERNATIONAL
CONFERENCES**

- 9-11 Feb 24 [Give a talk as an invited speaker on the topic of "Traffic Flow Modelling in Teaching Differential Equations" at SIMIODE EXPO 2024 International Online Conference](#)
- 22-25 Jan 24 [Give a talk as a keynote speaker on the topic of "Enhancing Traffic Dynamics: Pioneering Applications of Fractional Differential Equations in Complex Systems" at The Advances in Application of Analytical Methods in Solving Differential Equations \(Symmetry 2024\)](#)
- 31 Mar 23 [Give a special talk on the topic of "Data-Driven Traffic Control using Ramp Metering and Variable Speed Limit" to the faculty members of The International College of Digital Innovation \(ICDI\), Chiang Mai University on the ICDI Advisors Seminar](#)
- 15-17 Dec 22 [Give a talk as an invited speaker on the topic of "Long and Short-Term Prediction of Freeway Traffic Flow under Road Incidents using Machine Learning" at ICMA-MU 2022: International Conference in Mathematics and Applications, The Century Park Hotel, Bangkok, Thailand](#)
- 18-20 Dec 20 [Give a talk as an invited speaker on the topic of "Macroscopic Lane-changing Model of Traffic Flow on Multi-Lane Freeway" at ICMA-MU 2020: International Conference in Mathematics and Applications, The Century Park Hotel, Bangkok, Thailand](#)
- 1-2 Dec 20 [Give a talk as a keynote speaker for FAST Conference: SCIEMATHIC 2020, Malaysia on the topic of "Microsimulation of Traffic Flow on the Kwinana Freeway with Ramp Metering and Variable Speed Limit"](#)
- 16-18 Dec 18 [Give a talk as an invited speaker on the topic of "Oscillating Pressure-Driven Slip Flow and Heat Transfer Through an Elliptical Microchannel" at ICMA-MU 2018: The 2018 International Conference in Mathematics and Applications, The Century Park Hotel, Bangkok, Thailand](#)
- 3-8 Dec 12 The 2012 International Conference on Optimization and Control (ICO2012), Beijing, China
- 28-29 Jul 12 The 3rd International Symposium on Mathematics and Applied Mathematics (MAM2012), Thailand
- 17-19 Oct 12 The 38th Congress on Science and Technology of Thailand (STT), Chiang Mai, Thailand
- 1-3 Feb 12 The Franco-Thai Symposium, Thailand
- 10-12 Oct 12 The 37th Congress on Science and Technology of Thailand (STT), Bangkok
- 18-23 Jul 10 The International Conference on Optimization and Control (ICO2010), Guiyang, China
- 9-11 Jan 07 Asian Simulation and Modeling (ASIMMOD) 2007, Chiang Mai, Thailand

PATENT

- 3 Jan 22 B Wiwatanapataphee, T Siriapisith, and YH Wu. [Computer model of the coronary system with and with no bypass grafts](#). Patent number: 85480. Application number: 0901004239. Publisher URL <https://patentservice.ipthailand.go.th/ecert/qr/256401028835211>

BOOKS

- B.Wiwatanapataphee, YH Wu, [Numerical Methods: Theories and Algorithms](#). Physics Center Press Limited Partnership, Bangkok, Thailand, 2008, ISBN: 978-974-434-897-5
- YH Wu, B. Wiwatanapataphee, [Finite Element Method and Applications](#). MisterKopy Publishing Company, Bangkok, Thailand, 2006, ISBN: 974-94652-8-8
- B. Wiwatanapataphee, [Program Design: C++/Fortran 95/MATLAB](#). MisterKopy Publishing Company, Bangkok, Thailand, 2006, ISBN: 974-94652-7-X
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1. X Zhang, P Chen, Y Wu, B Wiwatanapataphee. 2024. Existence of Positive Solutions for a Singular Hessian Equation with a Negative Augmented Term. *Qualitative Theory of Dynamical Systems* 23 (2), 89.
2. X Zhang, P Chen, Y Wu, B Wiwatanapataphee. 2024. The extreme solutions for a σ -Hessian equation with a nonlinear operator. *Mathematical Methods in the Applied Sciences* 47 (2), 621-633.
3. X Zhang, Y Jiang, L Li, Y Wu, B Wiwatanapataphee. 2024. Multiple positive solutions for a singular tempered fractional equation with lower order tempered fractional derivative. *Elec. Research Archive* 32 (3), 1998-2015
4. X Zhang, P Chen, Y Wu, B Wiwatanapataphee. 2024. The iterative properties of solutions for a singular k-Hessian system, *Nonlinear Analysis: Modelling and Control* 29 (1), 146-165.
5. L Zhang, L Ci, Y Wu, B Wiwatanapataphee. 2023. The real estate time-stamping and registration system based on Ethereum blockchain, *Blockchain: Research and Applications*, 100175.
6. X Zhang, P Chen, YH Wu, B Wiwatanapataphee. 2023. A necessary and sufficient condition of the existence of entire large solutions for a k-Hessian system, *Applied Mathematics Letters*, 108745.
7. F Aljuaydi, B Wiwatanapataphee, YH Wu. 2023. Multivariate machine learning-based prediction models of freeway traffic flow under non-recurrent events, *Alexandria engineering journal* 65: 151-162.
8. X Zhang, H Tian, YH Wu, B Wiwatanapataphee. 2023. Existence of positive solutions for third-order semipositone boundary value problems on time scales, *Nonlinear Analysis: Modelling and Control* 28, 1-19.
9. X Zhang, P Chen, YH Wu, B Wiwatanapataphee. 2023. The extreme solutions for a σ -Hessian equation with a nonlinear operator. *Mathematical Methods in the Applied Sciences*. <https://doi.org/10.1002/mma.9673>
10. C Gu, C Wu, YH Wu, B Wiwatanapataphee. 2022 Distributionally robust ramp metering under traffic demand uncertainty, *Transportmetrica B: Transport Dynamics* 10 (1), 652-666.
11. X Zhang, H Tian, YH Wu, B Wiwatanapataphee. 2022 The radial solution for an eigenvalue problem of singular augmented Hessian equation, *Applied Mathematics Letters* 134, 108330.
12. N Chuchalerm, W Sawangtong, B Wiwatanapataphee, T Siriapisith. 2022 Study of Non-Newtonian blood flow-heat transfer characteristics in the human coronary system with an external magnetic field, *Mathematical Biosciences and Engineering* 19 (9), 9550-9570.
13. H Tian, X Zhang, YH Wu, B Wiwatanapataphee. 2022 Existence of Positive Solutions for a Singular Second-Order Changing-Sign Differential Equation on Time Scales, *Fractal and Fractional* 6 (6), 315.
14. X Zhang, D Kong, H Tian, YH Wu, B Wiwatanapataphee. 2022 An upper-lower solution method for the eigenvalue problem of Hadamard-type singular fractional differential equation, *Nonlinear Analysis: Modelling and Control* 27, 1-14.
15. X Zhang, P Xu, YH Wu, B Wiwatanapataphee. 2022 The uniqueness and iterative properties of solutions for a general Hadamard-type singular fractional turbulent flow model, *Nonlinear Analysis: Modelling and Control* 27 (3), 428-444.
16. Y Yang, S Liu, YH Wu. 2021 B Wiwatanapataphee, Pricing of volatility derivatives in a Heston-CIR model with Markov-modulated jump diffusion, *Journal of Computational and Applied Mathematics* 393, 113277.
17. X Zhang, L Liu, YH Wu, B Wiwatanapataphee. 2021 Multiple solutions for a modified quasilinear Schrödinger elliptic equation with a nonsquare diffusion term, *Nonlinear Analysis: Modelling and Control* 26 (4), 702-717.
18. X Zhang, L Liu, YH Wu, B Wiwatanapataphee, Y Cui. 2021 Solvability and asymptotic properties for an elliptic geophysical fluid flows model in a planar exterior domain, *Nonlinear Analysis: Modelling & Control* 26 (2), 315-333.
19. X Zhang, J Jiang, Y Wu, B Wiwatanapataphee. 2021 Iterative properties of solution for a general singular n-Hessian equation with decreasing nonlinearity, *Applied Mathematics Letters* 112, 106826.
20. M Ratchagit, B Wiwatanapataphee, D Nur. 2020 On Parameter Estimation of Stochastic Delay Difference Equation using the Two -delay Autoregressive Coefficients, *IEEE, ISRTI*: 310-314.
21. Y Yang, YH Wu, B Wiwatanapataphee. 2020 Time-consistent mean-variance asset-liability management in a regime-switching jump-diffusion market, *Financial Markets and Portfolio Management* 34 (4), 401-427.
22. S Liu, B Wiwatanapataphee, YH Wu, Y Yang. 2020 Variance Swap Pricing under Hybrid Jump Model, *EAST ASIAN JOURNAL ON APPLIED MATHEMATICS* 10 (3), 594-619.
23. G Keady, B Wiwatanapataphee. 2020 Variational approximations for steady unidirectional slip flows in microchannels, *Journal of Fluids Engineering* 142 (7), 074501.
24. N Chuchalerm, B Wiwatanapataphee, W Sawangton. 2020, Pressure-Driven Thermal Slip Flow in the Elliptical Channel with Radial Oscillatory Wall, *Journal of Applied Mathematics* 2020
25. L Liu, YH Wu, B Wiwatanapataphee. 2020 Multiple solutions for a modified quasilinear Schrödinger elliptic equation with a non-square diffusion term, *Authorea Preprints*.
26. M Ratchagit, B Wiwatanapataphee, N Dokuchaev. 2020 The m-delay Autoregressive Model with Application, *CMES-Computer Modeling in Engineering and Sciences* 122 (2), 487-504.
27. Y Zhang, YH Wu, B Wiwatanapataphee, F Angkola. 2020 Asset liability management for an ordinary insurance system with proportional reinsurance in a CIR stochastic interest rate and Heston stochastic volatility framework, *Journal of Industrial & Management Optimization* 16 (1), 71.

28. S Chomcheon, N Khajohnsaksumeth, B Wiwatanapataphee, X Ge, Modeling and simulation of air pollutant distribution in street canyon area with Skytrain stations, *Advances in Difference Equations* 2019 (1), 1-13.
29. S Pothipphan, N Khajohnsaksumeth, B Wiwatanapataphee. 2019 Effects of the wind speeds on heat transfer in a street canyon with a skytrain station, *Advances in Difference Equations* 2019 (1), 258 N.
30. N Bunkluarb, W Sawangtong, N Khajohnsaksumeth, B Wiwatanapataphee. 2019 Numerical simulation of granular mixing in static mixers with different geometries, *Advances in Difference Equations* 2019 (1), 238
31. B Wiwatanapataphee, W Sawangtong, N Khajohnsaksumeth, YH Wu, Oscillating PressureDriven Slip Flow and Heat Transfer Through an Elliptical Microchannel, *Advances in Difference Equations* (INPRESS).
32. M Kamran, B Wiwatanapataphee. 2018 Chemical reaction and Newtonian heating effects on steady convection flow of a micropolar fluid with second order slip at the boundary, *European Journal of Mechanics - B/Fluids*, vol. 71, pp. 138--150, doi:10.1016/j.euromechflu.2018.04.005
33. P Sawangtong, K Trachoo, W Sawangtong, B Wiwatanapataphee. 2018 The Analytical Solution for the Black-Scholes Equation with Two Assets in the Liouville-Caputo Fractional Derivative Sense, *Mathematics*, 6(8), pp. 129, doi:10.3390/math6080129
34. G Keady, B Wiwatanapataphee. 2018 Inequalities for the fundamental Robin eigenvalue for the Laplacian on N-dimensional rectangular parallelepipeds, *Mathematical Inequalities & Applications*, pp. 911--930.
35. G Keady, N Khajohnsaksumeth, B Wiwatanapataphee. 2018. On functions and inverses, both positive, decreasing and convex: And Stieltjes functions, *Cogent Mathematics and Statistics*, 5(1).
36. M Kaewbumrung, S Orankitjaroen, P Boonkrong, B Nuntadilok, B Wiwatanapataphee. 2018 Numerical Simulation of Dispersed Particle-Blood Flow in the Stenosed Coronary Arteries, *International Journal of Differential Equations*, vol. 2018, pp. 1--16, doi:10.1155/2018/2593425
37. M Kamran, B Wiwatanapataphee. 2018 Radiative magneto-micropolar fluid flow over a stretching/shrinking sheet with slip flow model, *Journal of Physics: Conference Series*, 1123, pp. 012034.
38. M Kamran, B Wiwatanapataphee and K Vajravelu. 2018 Hall current, Newtonian heating and second-order slip effects on convective magneto-micropolar fluid flow over a sheet, *International Journal of Modern Physics C*, vol. 29, no. 09, pp. 1850090, doi:10.1142/s0129183118500900
39. S Liu, Y Zhou, B Wiwatanapataphee, YH Wu, X Ge. 2018 The Study of Utility Valuation of Single-Name Credit Derivatives with the Fast-Scale Stochastic Volatility Correction, *Sustainability*, vol. 10, no. 4, pp. 1027.
40. Y Zhang, YH Wu, B Wiwatanapataphee, F Angola. 2017 Asset liability management for an ordinary insurance system with proportional reinsurance in a CIR stochastic interest rate and Heston stochastic volatility framework, *Journal of Industrial & Management Optimization*, 13(5), pp. 1--31, doi:10.3934/jimo.2018141
41. P Chuchard, S Orankitjaroen, B Wiwatanapataphee. 2017 Study of pulsatile pressure-driven electroosmotic flows through an elliptic cylindrical microchannel with the Navier slip condition, *Advances in Difference Equations*, vol. 2017, no. 1, doi:10.1186/s13662-017-1209-z
42. P Phang, B Wiwatanapataphee, YH Wu. 2017 'Social and economic influences on human behavioural response in an emerging epidemic, *Journal of Physics: Conference Series*, vol. 893, pp. 012017.
43. M Kaewbumrung, B Wiwatanapataphee, S Orankitjaroen, T Siriapisith. 2017 Numerical Simulation of Turbulent Blood Flow in the System of Coronary Arteries with Stenosis, *Journal of Biometrics & Biostatistics*, vol. 08, no. 02, doi:10.4172/2155-6180.1000344
44. G Xie, YH Wu, S Nardini, B Wiwatanapataphee, N Gui, Y Zhao. 2016 Advanced approaches of modeling and measurement for turbulence and heat transfer, *Advances in Mechanical Engineering*, vol. 8, no. 8, pp. 168781401666374, doi:10.1177/1687814016663743
45. X Zhang, L Liu, YH Wu, B Wiwatanapataphee. 2017 Nontrivial solutions for a fractional advection dispersion equation in anomalous diffusion, *Applied Mathematics Letters*, vol. 66, pp. 1--8.
46. Y Zhang, YH Wu, S Li, B Wiwatanapataphee. 2017 Mean-Variance Asset Liability Management with State-Dependent Risk Aversion. *North American Actuarial Journal*, 21(1), pp. 87-106, doi:10.1080/10920277.2016.1247719
47. J Wu, X Zhang, L Liu, YH Wu, B Wiwatanapataphee. 2016 Iterative algorithm and estimation of solution for a fractional order differential equation, *Boundary Value Problems*, 2016(1), doi:10.1186/s13661-016-0608-5.
48. A Charoenloedmongkhon, B Wiwatanapataphee, W Sawangtong, N Khajohnsaksumeth, L Giannini. 2016, Numerical simulation of air-bulk solid flows in a silo with inserts, *Advances and Applications in Fluid Mechanics*, vol. 19, no. 3, pp. 643--667, doi:10.17654/fm019030643
49. B Chimmalee, W Sawangtong, B Wiwatanapataphee. 2016 The effects of community interactions and quarantine on a complex network, *Cogent Mathematics*, vol. 3, no. 1, doi:10.1080/23311835.2016.1249141
50. X Zhang, L Liu, YH Wu, B Wiwatanapataphee. 2015 The Spectral Analysis for a singular Fractional Differential Equation with a Signed Measure, *Applied Mathematics and Computation*, 257, 252-263.
51. B Wiwatanapataphee, YH Wu, S Suharsono. 2014 Transient Flows of Newtonian Fluid through a Rectangular Microchannel with Slip Boundary, *Abstract and Applied Analysis*.
52. Q Sun, YH Wu, L Liu, B Wiwatanapataphee. 2014 Solution of Time Periodic Electroosmosis Flow with Slip Boundary, *Abstract and Applied Analysis*. <https://www.hindawi.com/journals/aaa/2014/789147/abs/>

53. X Zhang, L Liu, B Wiwatanapataphee, YH Wu. 2014 The eigenvalue for a class of Singular p-Laplacian fractional differential equations involving the Riemann-Stieltjes integral boundary condition. *App. Maths & Comp.* 235, 412-422.
54. N Bunkluarb, B Wiwatanapataphee, W Jumpen. 2014 Numerical Simulation of Blood Flow in the Right Coronary Artery with particle Chain, *Electronics, Computer and Applications*, 2014 IEEE Workshop , 813-817.
55. S Li, Y Zhou, X Ruan, B Wiwatanapataphee. 2014 Pricing of American Put Option under a Jump Diffusion Process with Stochastic Volatility in an Incomplete Market. *Abstract and Applied Analysis*. <https://www.hindawi.com/journals/aaa/2014/236091/abs/>
56. C Phang, YH Wu, B Wiwatanapataphee. 2014 Analysis Solution for the Spread of Epidemic Diseases in Community Clustered Network, *International Journal of Pure and Applied Mathematics* 94(2) 2014, 133-154.
57. N Khajohnsakumeth, B Wiwatanapataphee, YH Wu. 2013 The effect of boundary slip on the transient pulsatile flow of a modified second-grade fluid, *Abstract and Applied Analysis* 2013.
58. Q Sun, YH Wu, L Liu, B Wiwatanapataphee. 2013 Study of a Newtonian through Circular Channels with Slip Boundary Taking into Account Electrokinetic Effect. *Abstract and Applied Analysis* at <https://www.hindawi.com/journals/aaa/2013/718603/abs/>
59. J Jiang, X. Ge, B. Wiwatanapataphee and X. Ge. 2013 Nonexistence results for the SchrodingerPoisson equations with spherical and cylindrical potentials in R^3 , *Abstract and Applied Analysis* 2013. <https://www.hindawi.com/journals/aaa/2013/890126/abs/>
60. C Phang, YH Wu, B.Wiwatanapataphee. 2013 Computation of Domain of Attraction for the Suboptimal Immunity Epidemic Models using the Maximal Lyapunov Function Method , *Abstract and Applied Analysis*, 2013, 1-7, article id 508794 (top Quartile in Appl Maths - ISI web of Knowledge)
61. Y Zhou, YH Wu, X Ge, B Wiwatanapataphee. 2013 A Robust Weak Taylor Approximation Scheme for Solutions of jump-diffusion Stochastic Differential Delay Equations , *Abstract and Applied Analysis*, 2013, 1-8, article id 750147(top Quartile in Appl Maths - ISI web of Knowledge)
62. B Nuntadilok, J Poulter, P Boonkrong, B Wiwatanapataphee. 2013 Numerical Study of Pulsatile Blood Flow in the Coronary System with the RCA Bypass Graft. *Journal of Pure and Applied Mathematics: Advances and Applications* 9 (2), 81-106.
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