Benchawan Wiwatanapataphee

Associate Professor, PhD

Curtin University
Kent St, Bentley WA 6102
b.wiwatanapataphee@curtin.edu.au

ORCID https://orcid.org/0000-0003-1875-6984
RESEARCHERID https://www.researcherid.com/rid/E-5421-2010
GOOGLE SCHOLAR https://scholar.google.com/citations?user=td86cJcAAAAJ&hl=en
LINKEDIN PROFILE https://www.linkedin.com/in/benchawan-wiwatanapataphee-28560011a/
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 BypassGraft" 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 - 2022	2.56ARC Improving Road Network Operations under Non-recurrent Events (LP170100341), AUD360,000	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

TEACHING EXPERIENCES

- Curriculum Development
  - Strategic development of the BSc (Financial Mathematics) course at Curtin University in 2017, which now attracts many international students and has led to the establishment of an articulation agreement with a University (GDUFE) in China.
  - Strategic establishment of the BSc (Actuarial Science) program at Mahidol University as then the Deputy Department Head. A student articulation agreement was then established between Mahidol and Curtin for this program in 2008, and 10-20 students each year are transferred from Mahidol to Curtin to complete their final 1.5 years of undergraduate study since 2011.
- 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)

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 Mongkot Institute, Thailand
  - Suranaree University of Technology

PROJECT & DISSERTATION SUPERVISION STATS[1]

	Current	Graduated
PhD	4	35
PG	1	27
UG	0	32

At Curtin, I have supervised students for the following units:

- Industrial Project and Industrial Engineering Masters Project
- Mathematics Masters Project 1, 2, and 3
- Actuarial Science Honours Dissertation 1 and 2
- Advanced Science Capstone

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
	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

GRADUATED PHD STUDENTS (MAHIDOL)

2018	Mongkol Kaewbumrung	Rajamangala University Ayutthaya
	Din Prathumwan	Khon Kean University, Thailand
2017	Pearanat Chuchard	Ramkamhang University, Thailand
	Kamonchat Trachoo	Mahasarakham 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	IGive 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

REFEREED JOURNAL PAPERS

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 Tain, 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, ISRITI: 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 Pothiphan, 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 Wiwattanapataphee. 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 Sigular 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 Khajohnsaksumeth, 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 R3, 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.
63. B Wiwatanapataphee, YH Wu, T Siriapisith, B Nuntadilok. 2012 Effect of branchings on blood flow in the system of human coronary arteries. Mathematical Biosciences and Engineering 9(1) , pp. 199-214 (B band)
64. B Wiwatanapataphee, YH Wu. 2012 Mathematical study of blood flow in the real model of the right coronary artery - Bypass graft system. Dynamics of Continuous, Discrete and Impulsive Systems Series B: Applications and Algorithms 19(4-5) , pp. 621-635. (B band)
65. X Zhang,, L Liu, B Wiwatanapataphee, YH Wu. 2012 Positive solutions of eigenvalue problems for a class of fractional differential equations with derivatives. Abstr. Appl. Anal. 2012, Art. ID 512127, 16 pp (top Quartile in Appl Maths – ISI web of Knowledge)
66. B Wiwatanapataphee, T Mookum, YH Wu. 2011 Numerical simulation of two-fluid flow and meniscus interface movement in the electromagnetic continuous steel casting process. Discrete and Continuous Dynamical Systems - Series B 16(4), pp. 1171-1183 (A band).
67. SY Lai, B Wiwatanapataphe. 2011 The asymptotics of global solutions for semilinear wave equations in two space dimensions. Dyn. Contin. Discrete Impuls. Syst. Ser. B Appl. Algorithms 18(5), 647–657. 35L71 (B band)
68. K Kaorapapong, S Amornsamankul, I Tang, B Wiwatanapataphee. 2011 Heat transfer in cemented hip replacement process, International Journal of Mechanics 5(3), 202-209.
69. W Jumpen, S Orankitjaroen, P Boonkrong, B Wiwatanapataphee. 2011 SEIQR-SIS epidemic network model and its stability 2011 International Journal of Mathematics and Computers in Simulation 5(4), 326-333.
70. T Mookum, B Wiwatanapataphee, YH Wu. 2010 Modeling of two-fluid flow and heat transfer with solidification in continuous steel casting process under electromagnetic force. 2010. Int. J. Pure Appl. Math 63(2), 183-195.
71. S Amornsamankul, K Kaorapapong, B Wiwatanapataphee. 2010 Three-dimensional simulation of femur bone and implant in femoral canal using finite element method. International Journal of Mathematics and Computers in Simulation 4(4), 171-178.
72. W Chuayjan, S Pothiphan, B Wiwatanapataphee, YH Wu. 2010 Numerical simulation of granular flow during filling and discharging of a silo. Int. J. Pure Appl. Math. 62(3), 347– 364. 76T25 (76M10)
73. B Wiwatanapataphee, YH Wu, M Hu, K Chayantrakom. 2009 A study of transient flows of Newtonian fluids through micro-annuals with a slip boundary. J. Phys. A 42 (6), article number 065206, 14 pp. (A band).
74. B Wiwatanapataphee. 2008 Modelling of non-Newtonian blood flow through stenosed coronary arteries. Dyn. Contin. Discrete Impuls. Syst. Ser. B Appl. Algorithms 15 (5), 619–634. 76Z05 (B band)
75. YH Wu, B Wiwatanapataphee, M Hu. 2008 Pressure-driven transient flows of Newtonian fluids through microtubes with slip boundary. Physica A: Statistical Mechanics and its Applications 387(24), pp. 5979-5990.
76. S Lai, YH Wu, B Wiwatanapataphee. 2008 On exact travelling wave solutions for two types of nonlinear K(n,n) equations and a generalized KP equation. J. Comput. Appl. Math. 212 (2) 291– 299. (A band)

77. L Liu, P Kang, YH Wu, B Wiwatanapataphee. 2008 Positive solutions of singular boundary value problems for systems of nonlinear fourth order differential equations. Nonlinear Analysis: Theory, Methods & Applications. 68 (3), 485–498. (A band)
78. P Hadkaew, B Wiwatanapataphee, YH Wu. 2008 Project-based Learning Model for the Study of Blood Flow in the Human blood Circulatory System, The International Journal of Learning, 15, 195-202 (B band)
79. B Wiwatanapataphee, YH Wu, S Amornsamankul, B Novaprateep. 2008 Simulation of transient blood flows in the artery with an asymmetric stenosis, ANZIAM Journal 48, C1006-1020 (B band)
80. P Ruengsakulrach, AK Joshi, S Fremes, S Foster, J Butany, B Wiwatanapataphee, Y Lenbury. 2008 Wall shear stress and atherosclerosis: numerical blood flow simulations in the mouse aortic arch, WSEAS Transactions on Fluid Mechanics 2, 90-100.
81. X Zhang, L Liu, B Wiwatanapataphee, YH Wu. 2007 Singular higher-order semipositone nonlinear eigenvalue problems. Dyn. Contin. Discrete Impuls. Syst. Ser. A Math. Anal. 14 (4), 565–576.
82. YH Wu, B Wiwatanapataphee. 2007 Modelling of turbulent flow and multi-phase heat transfer under electromagnetic force, Discrete and Continuous Dynamical Systems - Series B 2007(3), 695-706.
83. W Yuan, B Wiwatanapataphee, YH Wu. 2007 On normal criteria of meromorphic functions. Int. J. Math. Sci. 6(1), 29-36.
84. CF Tang, R Jiang, QS Wu, B Wiwatanapataphee, YH Wu. 2007 Mixed traffic flow in Anisotropic continuum model, Transportation research record, 1999(2007), 13 -22 .
85. T Hon, YH Wu, B Wiwatanapataphee, C X Yang. 2007 Mathematical analysis of the effect of tectonic stress on the stability of underground tunnels, ANZIAM Journal, 47 (2007) C858-827.
86. B Wiwatanapataphee, K Chayantrakom, YH Wu. 2007 Mathematical modelling and numerical simulation of fluid-magnetic particle flow in a small vessel, International Journal of Mathematical Models and Methods in Applied Sciences 1, 205-215.
87. D Poltem, B Wiwatanapataphee, YH Wu, Y Lenbury. 2006 A numerical study of non-Newtonian blood flow in stenosed coronary artery bypass with grafts, ANZIAM Journal, 47, C-277-291.
88. S Srimongkol, B Wiwatanapataphee, YH Wu. 2006 Computer simulation of polymethymethacrylate bone cement flow through femoral canal and cancellous bone, ANZIAM Journal, 47, C355-369.
89. B Wiwatanapataphee, S Amornsamankul, YH Wu, Y Lenbury. 2006 Simulation of transient blood flow through stenosed coronary arteries, WSEAS Transactions on Fluid Mechanics, 1, 771-778.
90. B Wiwatanapataphee, S Kongnual, YH Wu. 2006 Finite element analysis of turbulent flow of molten steel in tundish vessels. Int. J. Pure Appl. Math. 26 (3), 409–422.
91. B Wiwatanapataphee, D Poltem, YH Wu, Y Lenbury 2006 Simulation of pulsatile flow of blood in stenosed coronary artery bypass with graft. Math. Biosci. Eng. 3 (2), 371-383.
92. S Amornsamankul, B Wiwatanapataphee, YH Wu, Y Lenbury. 2006 Effect of Non-Newtonian Behaviour of blood on Pulsatile Flows in Stenotic Arteries, International journal of Biomedical Sciences, 1, 42-46.
93. K Chayantrakom, B Wiwatanapataphee, YH Wu, QS Wu. 2005 Continuum modelling of granular flows. East-West J. Math. Spec. 2005, 243-252.
94. B Wiwatanapataphee, D Poltem, YH Wu, Y Lenbury. 2005 Unsteady state blood flow in stenosed coronary artery bypass grafts. East-West J. Math. Spec. 2005, 59-67.
95. YH Wu, ZH Tang, B Wiwatanapataphee. 2005 A computational method for simulation and control of fluid flow in porous media. East-West J. Math. Spec. 2005, 23-30.
96. YH Wu, B Wiwatanapataphee, X Yu. 2004 An enthalpy control volume method for transient mass and heat transport with solidification. Int. J. Comput. Fluid Dyn. 18 (7), 577–584.
97. B Wiwatanapataphee, YH Wu, J Archapitak, PF Siew, B Unyong. 2004 A numerical study of the turbulent flow of molten steel in a domain with a phase-change boundary, Journal of Computational and Applied Mathematics 166 (1), 307-319.
98. J Archapitak, B Wiwatanapataphee, YH Wu, IM Tang. 2004 A finite element scheme for the determination of electromagnetic force in continuous steel casting. Int. J. Comput. Numer. Anal. Appl. 5(1), 81-95.
99. JB Song, YH Wu, B Wiwatanapataphee. 2000 Probability distribution of random wave forces in weakly nonlinear random waves, Ocean Engineering 27 (12), 1391-1405.
100. YH Wu, B Wiwatanapataphee, R Collinson, G Zhang. 2000 An exponentially fitted enthalpy control volume algorithm for coupled fluid flow and heat transfer. ANZIAM J. 42C, C1580C1598.
101. JM Hill, YH Wu, B Wiwatanapataphee. 1999 Analysis of flux flow and the formation of oscillation marks in the continuous caster. Journal of Engineering Mathematics 36 (4), 311-326.
102. IM Tang, S Varamit, B Wiwatanapataphee. 1999 Local field fluctuations in the mixed spinel ferrite, Ni1-xZnxFe2O4, Modern Physics Letters B 13 (6-7), 209-214.