Benchawan Wiwatanapataphee
Associate Professor, PhD

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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

2016   Prize in most cited Mathematics articles - Scopus from 2010 to 2016 from Mahidol University, Thailand, THB 100,000

2010   The best research in Applied Mathematics from Mahidol University, Thailand, THB 100,000

2007   Prize of the Best Research in Mathematical Sciences from the National Research Council of Thailand, for the seminal research on "Mathematical Modelling of Blood flow in the Coronary Artery Bypass Graft", THB 100,000

2007   Australia Endeavour Research Fellowship from the Ministry of Education, Australia, AUD 25,000

2005   Endeavour Australia Cheung Kong Award from the Ministry of Education, Australia, AUD 25,000

1999   Third World Academy of Science Award for Young Scientists in Thailand in the field of Mathematical Sciences by National Research Council THAILAND (NRCT) and the Third World Academy of Sciences (TWAS), THB 100,000

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

TEACHING EXPERIENCES	• **Curriculum Development**
	    o 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.
	    o 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**
	    o Computational Mathematics (UG)
	    o Industrial Engineering Project (UG)
	    o Applied Mathematical Modelling (UG) and Applied Mathematics Topics (PG)
	    o Advanced Numerical Analysis (PG)
	    o Supply Chain Modelling and optimisation (UG and PG)

OTHER PROFESSIONAL AND ACADEMIC SERVICES	• **Grant Assessment**
	    o The Australian Research Council (ARC)
	    o Thailand Research Funds (TRF)
	    o National Science and Technology Development Agency (NSTDA)
	    o National Research Council of Thailand (NRCT)
	
	• **Journal Editing**
	    o A Special Issue of the International Journal of Differential Equations (Current)
	    o Cogent Mathematics (Comp. Sci. section)
	    o A Special Issue of Mathematical Problems in Engineering
	    o Abstract and Applied Analysis special issue: Nonlinear Functional Analysis of Complex Boundary Value Problems
	    o A Special Issue of Dynamics of Discrete, Continuous and Impulsive System B
	
	• **Journal Review Service**
	    o Computer and Mathematics with Application
	    o Nonlinear Analysis - Theory Methods and Applications
	    o Advances in Differential Equations, Applied Mathematical Modelling
	    o The Songklanakarin Journal of Science and Technology
	    o Meccanica (MECC)
	    o Applied Bionics and Biomechanics
	    o Mathematical Biosciences and Engineering (MBE)
	
	• **PhD Thesis Examination**
	    o BASR University Of Karachi, Pakistan
	    o Visvesvaraya Technological University, Karnataka state, India
	    o Chulalongkorn University, Thailand
	    o Silpakorn University, Thailand
	    o Thammasat University, Thailand
	    o King Mongkot Institute, Thailand