

# Curriculum Vitae

## Personal Details

**Name** : Assist. Prof. Sunisa Rimcharoen, Ph.D.  
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## Education

- 2005 - 2009** Ph.D. (Computer Engineering), Department of Computer Engineering, Chulalongkorn University, Thailand.  
Thesis title: Real Options Approach to Finding Optimal Stopping Time in Genetic Algorithms  
Supervisor: Asst. Prof. Daricha Sutivong, Ph.D.  
Co-supervisor: Prof. Prabhas Chongstitvatana, Ph.D.
- 2003 - 2005** M.Sc. (Computer Science), Chulalongkorn University, Thailand.  
Thesis title: An Adaptation of Evolution Strategies for Time Series Forecasting  
Supervisor: Asst. Prof. Daricha Sutivong, Ph.D.  
Co-supervisor: Prof. Prabhas Chongstitvatana, Ph.D.
- 1999 - 2003** B.Sc. (Computer Science), Burapha University, Thailand.

## Scholarship

Full scholarship (Master and Doctoral Degree) from the Higher Education Commission, Thailand

## Employments

- 2009 - present** Assistant professor at the Faculty of Informatics, Burapha University
- 2011** Postdoctoral at the Laboratoire d'Informatique Fondamentale d'Orléans, University of Orléans, France
- 2008** Invited lecturer at Department of Mathematics, Chulalongkorn University  
Invited lecturer at Department of Mathematics, King Mongkut's University of Technology North Bangkok
- 2007** Visiting researcher at the Centre of Excellence for Research in Computational Intelligence and Applications (CERCIA), the University of Birmingham, UK

## Research Interests

Evolutionary computation, Machine learning, Real options, Forecasting, Decision analysis, Risk management, Algorithmic trading

## Professional Activities

- SAS Instructor (2014 – 2017)
- Steering Committee for the International Joint Conference on Computer Science and Software Engineering (JCSSE 2012 - 2014)
- Judges Committee for the ACM-ICPC Thailand 2013
- Technical Program Committee for the 2<sup>nd</sup> ASEAN Undergraduate Conference in Computing (AUC<sup>2</sup> 2013)
- Local Organizing Committee for the 4<sup>th</sup> International Conference on Knowledge and Smart Technology (KST 2012)
- Academic Committee for the 3<sup>rd</sup> International Science Social-Science Conference (I-SEEC 2011)
- Invited Speaker (with Prof.Prabhas Chongstitvatana) at the Workshop on UniNet Network and Computer Application (WUNCA 23), "How to apply Genetic Algorithm Successfully", Mahidol University, 26 January 2011
- Committee for the 35<sup>th</sup> Congress on Science and Technology of Thailand (2010)
- Technical Program Committee the International Conference on Knowledge and Smart Technology (KST 2009 - present)
- Committee for the National Software Contest (NSC) (2009 - present)
- Invited Lecturer for the Computer Olympiad Camp (2009 - present)
- Invited Lecturer for the Master Teacher (Computer) Project (2010 - 2012)

## Courses Taught

- Algorithm Design and Applications
- Data Structures and Algorithms
- Data Structures and Algorithms in Mathematics
- Decision Analysis
- Decision Support and Intelligent System
- Information and Communication Technology
- Information Storage and Retrieval
- Introduction to Artificial Intelligence
- Language and Programming Languages
- Logical Thinking and Problem Solving for Innovation
- Mathematics for Computing II
- Programming Fundamental I
- Programming Fundamental II
- Science and Mathematics for Computing

## Academic Administration

- Chair of the Committee for Curriculum Administration of Graduate Studies (2013 - present)
- Head of the Computer Science Department, Faculty of Informatics, Burapha University (1 October 2011 – 30 September 2012)
- Acting associate dean being in charge of academic and research, Faculty of Informatics, Burapha University (29 March – 30 April 2012)

## Publication

### Journal

- Dilok Pumsuwan and Sunisa Rimcharoen, "Performance Comparison and Analysis of Crossover Techniques in Genetic Algorithms for the Function of Unitation Problems". Journal of Science and Technology Mahasarakham University, 2018.
- Sunisa Rimcharoen, Srichol Phiromlap, and Nutthanon Leelathakul, "Analysis of frequency-based compact genetic algorithm (fb-cGA)". Maejo Int. J. Sci. Technol., Vol. 9 No. 1, 2015.
- Sunisa Rimcharoen, "Compact Genetic Algorithm and Its Applications", Burapha Science Journal, Vol. 17 No. 2, 2012. (in Thai)
- Sunisa Rimcharoen, Daricha Sutivong, and Prabhas Chongstitvatana, "Real Options Approach to Evaluating Genetic Algorithms". Applied Soft Computing, Vol. 9 No. 3, 2009.

### Conference

- Pannavich Ariyatanakatawong and Sunisa Rimcharoen, "Enhanced Genetic Algorithm with Risk Management Model for Optimizing Rice Plantation", International Symposium on Communications and Information Technologies (ISCIT 2018), September 26-29, 2018.
- Kriengsak Panphotong, Nutthanon Leelathakul and Sunisa Rimcharoen, "Appliance Classification, Anomaly Detection, Management, and Controlling Systems for Smart Plugs", National Conference on Computing and Information Technology, July 5-6, 2018. (Thai)
- Teerapong Kulrattanavijitra, Nutthanon Leelathakul and Sunisa Rimcharoen, "Effectiveness of Similarity Matrices for Detecting Students' Assignment Plagiarism", National Conference on Computing and Information Technology, July 5-6, 2018. (Thai)
- Supawadee Srikamdee, Sunisa Rimcharoen and Nutthanon Leelathakul, "Sugarcane Yield and Quality Forecasting Models: Adaptive ES vs. Deep Learning", International Conference on Intelligent Systems, Metaheuristics & Swarm Intelligence, March 24-25, 2018.
- Janya Onpans, Nutthanon Leelathakul and Sunisa Rimcharoen, "Time Series based Gastropod Classification", International Conference on Knowledge and Smart Technology (KST), 2018.
- Chanchana Sornsoontorn, Sunisa Rimcharoen, Nutthanon Leelathakul, Asanee Kawtrakul and Paruj Ratanaworabhan, "Using document classification to improve the performance of a plagiarism checker: a case for Thai language documents", International Computer Science and Engineering Conference (ICSEC 2017), Bangkok, Thailand, Nov 15-18, 2017.
- Sakda Boonpa, Sunisa Rimcharoen and Thatsanee Charoenporn, "Relationship extraction from thai children's tales for generating illustration", The 2nd International Conference on Information Technology (InCIT 2017), Nakhon Pathom, Thailand, Nov 2-3, 2017.
- Peerasak Pianprasit, Parinya Seesai and Sunisa Rimcharoen, "Association rule mining for analyzing placement test of computer science students", The 2nd International Conference on Information Technology (InCIT 2017), Nakhon Pathom, Thailand, 2-3 Nov 2017.
- Dilok Pumsuwan, Sunisa Rimcharoen and Nutthanon Leelathakul, "Front-Rear Crossover: A New Crossover Technique for Solving a Trap Problem", The 14th International Joint Conference on Computer Science and Software Engineering, July 12-14, 2017.
- Supawadee Srikamdee, Sunisa Rimcharoen and Nutthanon Leelathakul, "Forecasting Sugarcane Yield Using  $\mu$ + $\lambda$  Adaptive Evolution Strategies", The 8th

International Conference on Computer Science and its Applications (CSA-16), Dec 19-21, 2016.

- Thawaree Sukkasem and Sunisa Rimcharoen, "A Hierarchical Clustering Analysis of the ASEAN and the Top 10 World's Major Stock Indices", International Conference on Information Technology (InCIT), Oct 27-28, 2016.
- Thawaree Sukkasem and Sunisa Rimcharoen, "Analyzing SET High Dividend 30 Using Agglomerative Hierarchical Clustering", National Conference on Information Technology: NCIT), Oct 26-27, 2016.
- Suriya Yodphet, Sunisa Rimcharoen and Nutthanon Leelathakul, "LARG: Loss Avoidance Technical Trading Rules using Genetic Algorithm", In Proceedings of 8th International Conference on Knowledge and Smart Technologies (KST 2016), Chiangmai, Thailand, Feb 3 - 6, 2016.
- Wachira Khaengngan and Sunisa Rimcharoen, "Creating a Math Class Grade 1 with CFG: Application on Tablet PCs with Automatic Analysis of Learning Outcomes", In Proceedings of the 10th national conference on computing and information technology (NCCIT2014), Phuket, Thailand, May 8 - 9, 2014.
- Sunisa Rimcharoen, Nutthanon Leelathakul and Supawadee Srikamdee, "A Hybrid ( $\mu$ + $\lambda$ ) Evolutionary Algorithm for Evolving Simple Trading Rules: Case Study on Stock Exchange of Thailand (SET50)". In Proceedings of 6th International Conference on Knowledge and Smart Technologies (KST 2014), Burapha University, Chonburi, Thailand, Jan 30 - 31, 2014.
- Chakkrit Sirirak, Sunisa Rimcharoen and Kriengkrai Thalerngpol, "Acupuncture Expert System for Office Syndrome". In Proceedings of 17th International Computer Science and Engineering Conference (ICSEC 2013), Silpakorn University, Bangkok, Thailand, September, 4 - 6, 2013. (in Thai)
- Davy Sorn and Sunisa Rimcharoen, "Web Page Template Design Using Interactive Genetic Algorithm". In Proceedings of 17th International Computer Science and Engineering Conference (ICSEC 2013), Silpakorn University, Bangkok, Thailand, September, 4 - 6, 2013.
- Srichol Phiromlap and Sunisa Rimcharoen, "A Frequency-Based Updating Strategy in Compact Genetic Algorithm". In Proceedings of 17th International Computer Science and Engineering Conference (ICSEC 2013), Silpakorn University, Bangkok, Thailand, September, 4 - 6, 2013.
- Supawadee Srikamdee, Sunisa Rimcharoen and Nutthanon Leelathakul, "Prediction of the Stock Exchange of Thailand Index using an Evolutionary Algorithm Portfolio". In Proceedings of 5th International Conference on Knowledge and Smart Technologies (KST 2013), Burapha University, Chonburi, Thailand, Jan 31 - Feb 1, 2013.
- Nattaporn Saikhamwong and Sunisa Rimcharoen, K-Means Clustering of the Stock Exchange of Thailand 50 (SET 50) for Portfolio Diversification, In Proceedings of the 11th International Conference on e-Business (iNCEB 2013), Kasetsart University Si Racha, Chonburi, Thailand, Jan 30 - Feb 1, 2013. (in Thai)
- Supawadee Srikamdee, Sunisa Rimcharoen and Krisana Chainnasarn, "NeuroEAs-based algorithm portfolios for classification problems". Proceedings of 4th International Conference on Knowledge and Smart Technologies (KST 2012), Burapha University, Chonburi, Thailand, July 7-8, 2012.
- Supawadee Srikamdee, Sunisa Rimcharoen and Krisana Chainnasarn, "A Simple Portfolio Algorithm using Collaborative Learning of GA and ANN for Classification Problem". In Proceedings of 3rd International Conference on Knowledge and Smart Technologies (KST 2011), Burapha University, Chonburi, Thailand, July 8-10, 2011.
- Niphon Sukwilai, Ureerat Suksawatchon, and Sunisa Rimcharoen. "A Clustering of Risk Factors for Students' Dropping Out to Select Strategies for Assistance Students by Using Self-Organizing Map". In Proceedings of 3rd International Conference on Knowledge and Smart Technologies (KST 2011), Burapha University, Chonburi, Thailand, July 8-10, 2011. (in Thai)
- Peera Thontirawong, Alongkot Burutarchanai, Sunisa Rimcharoen and Prabhas Chongstitvatana, "Running Compact Genetic Algorithm on Large Scale Problems

Using Graphics Processing Unit", In Proceedings of 26th International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2011), Busan, Korea, June 19-22, 2011.

- Jakkapan Sucher and Sunisa Rimcharoen, "Solving Scheduling Problem of an Electric Bill Delivery using (1+lambda) Evolutionary Algorithm". In Proceedings of 2nd International Conference on Knowledge and Smart Technologies (KST 2010), Burapha University, Chonburi, Thailand, July 24-25, 2010.
- Supawadee Srikamdee and Sunisa Rimcharoen, "A Travel Itinerary Planning using Interactive Genetic Algorithm". In Proceedings of The 7th International Joint Conference on Computer Science and Software Engineering (JCSSE2010), Ramkhamhaeng University, Bangkok, Thailand, May 12-14, 2010. (in Thai)
- Sunisa Rimcharoen, Daricha Sutivong, and Prabhas Chongstitvatana, "Optimal Stopping Time of Compact Genetic Algorithm on Deceptive Problem Using Real Options Analysis". In Proceedings of the 2007 IEEE Congress on Evolutionary Computation (CEC 2007), Singapore, September 25-28, 2007.
- Sunisa Rimcharoen, Daricha Sutivong, and Prabhas Chongstitvatana, "A Synthesis of Optimal Stopping Time in Compact Genetic Algorithm Based on Real Options Approach". In Proceedings of Genetic and Evolutionary Computation Conference (GECCO 2007), London, England, July 7-11, 2007.
- Sunisa Rimcharoen, Daricha Sutivong, and Prabhas Chongstitvatana, "Real Options Approach to Finding Optimal Stopping Time in Compact Genetic Algorithm". In Proceedings of the 2006 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2006), Taipei, Taiwan, October 8-11, 2006.
- Sunisa Rimcharoen, Daricha Sutivong, and Prabhas Chongstitvatana, "Updating Strategy in Compact Genetic Algorithm Using Moving Average Approach". In Proceedings of the 2006 IEEE International Conferences on Cybernetics & Intelligent Systems (CIS) and Robotics, Automation & Mechatronics (RAM) (CIS-RAM 2006), Bangkok, Thailand, June 7-9, 2006.
- Sunisa Rimcharoen, Daricha Sutivong, and Prabhas Chongstitvatana, "Prediction of the Stock Exchange of Thailand Using Adaptive Evolution Strategies". In Proceedings of 17th IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2005), Hong Kong, China, November 14-16, 2005.
- Sunisa Rimcharoen, Daricha Sutivong, and Prabhas Chongstitvatana, "Curve Fitting Using Adaptive Evolution Strategies for Forecasting the Exchange Rate". In Proceedings of 2nd Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology Annual International Conference (ECTI-CON 2005), Chonburi, Thailand, May 12-13, 2005.
- Jiradej Ponsawat, Sunisa Rimcharoen, Daricha Sutivong, and Prabhas Chongstitvatana, "GAGA: Model Building Genetic Algorithms Using Sub-population and Sub-probability Vector". In Proceedings of 9th Annual National Symposium on Computational Science and Engineering (ANSCSE9), Bangkok, Thailand, March 23-25, 2005.
- Sunisa Rimcharoen and Prabhas Chongstitvatana, "An adaptation of evolutionary strategies for forecasting the exchange rate". In Proceedings of 8th Annual National Symposium on Computational Science and Engineering (ANSCSE8), Nakhon Ratchasima, Thailand, July 21-23, 2004.

## Research Funds

- Hybrid Ensemble Learning for Software Cost Estimations, Funded by National Research Council of Thailand (Year 2011-2012)
- A Hybrid Method for Feature Extraction in Real-time Intrusion Detection, Funded by National Research Council of Thailand (Year 2011-2012)
- Dynamic Problem Solving for Mobile Agent Migration Planning, Funded by National Research Council of Thailand (Year 2011-2012)

- Prediction of the Stock Exchange of Thailand Index using an Evolutionary Algorithm Portfolio, Funded by Faculty of Informatics, Burapha University (Year 2012)
- Hybrid Evolutionary Algorithm for Generating Stock Trading Strategy based on Technical Analysis, Funded by Faculty of Informatics, Burapha University (Year 2013)
- Exudates in Diabetes Patient Classification using Ensemble Learning, Funded by National Research Council of Thailand (Year 2012-2013)
- Optimal Methods for Classification of Highly Imbalanced Datasets, Funded by National Research Council of Thailand (Year 2013-2014)
- Emotion Recognition of Affective Speech Based on Hybrid Classifiers, Funded by National Research Council of Thailand (Year 2013-2014)
- Analyzing the Effect of Negative Correlation Learning on Estimation of Distribution Algorithms, Funded by Thailand Research Fund (Research Grant for New Scholar) (Year 2013-2015)
- Algorithms for Forecasting Sugarcane Production Level, Funded by National Research Council of Thailand (Year 2016-2017)
- Generating Non-Pylogenetic Graph in Plagiarism Detection System, Funded by National Research Council of Thailand (Year 2017-2018)
- Artificial Intelligence Trading System, Funded by Thailand Research Fund (Year 2018-2019)