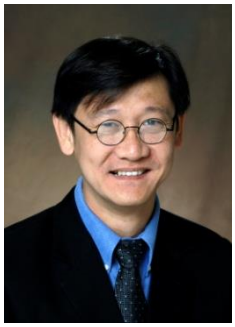
Curriculum Vitae



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Current Position: Assoc.Professor at Department of Industrial Engineering, ChiangMai University

Education:

- Bachelor of Engineering in Industrial Engineering, Chiang Mai University, 1993.
- Master of Science in Industrial Engineering, Oregon State University, 2000.
- Master of Science in Statistics, Oregon State University, 2003.
- Doctor of Philosophy in Industrial Engineering, Oregon State University, 2003.

Research Interests:

- Applied Statistics in Industrial & Manufacturing and Healthcare
- Statistical Quality Control (SQC)
- Statistical Process Control (SPC)
- Design of Integrated Quality Networks for multi-stage processes
- Design of advanced SPC and tolerance analysis for HDD arm
- Material Flow Cost Accounting: MFCA for sustainable and green production
- Green Productivity, Quality Management and Quality Technology
- Statistical Quality Improvement Techniques
- Application of Advanced Design of Experiments
- Statistical Quality Tolerancing/Tolerance Analysis/Tolerance Synthesis
- Economic Design of Quality System, Quality Engineering
- Design of Quality for Push-Pull Production System
- Healthcare Quality and Productivity Improvement
- Community Enterprise Improvement

Selected Publication:

1. Boonmee, C., Akarawongsapat, K., Wisittipanich, W., Chattinnawat, W., Khwanngern, K. (2024) ***Differential Evolution for Cleft Lip and/or Cleft Palate Patient Treatment Scheduling Problems: A northern Thailand hospital case study***, Annals of Operation Research (In press).

2. Suttipong, R., Phanphet, S. Chimboonmam P., Chattinnawat, W. (2022) ***Generalized AHP Approach with Latent Factor and Stratum for Selecting Program of Improving the Position of Thailand's OTOP Program for Elderly Consumer Market***, Journal of Sustainability Science and Management, Vol.17, No.10, pp. 22-33. https://jssm.umt.edu.my/wp-content/uploads/sites/51/2022/11/3-JSSM-Volume-17-Number-10-October-2022-FINAL.pdf

3. Seifbarghy, M., Hamidi, M., Chattinnawat, W. (2022) ***Optimizing the quality level of raw materials based on material flow cost accounting in a production system withrework***, The Engineering Economist, Volume 67, Issue 4, pp. 288-305. https://www.tandfonline.com/doi/full/10.1080/0013791X.2022.2121883

4. Sensang, P., Jomvong, T., Santianotai, R., Chattinnawat, W. (2022) ***New Product Development Framework based on University-Community Engagement: Case Study of Thailand OTOP Development for Elderly Consumer***, International Journal of Global Optimization and Its Application, Vol. 1, No. 1, pp.1-11. https://journal.srnintellectual.com/index.php/ijgoia/article/view/8/7

5. Suttipong, R., Phanphet, S., Wangmai, A., Reungsri, S., Chattinnawat, W. (2022) ***Extended AHP Approach with Latent Factor and Stratum in Prioritizing and Positioning of OTOP Thailand's Program for Elderly Market***, International Journal of Global Optimization and Its Application, Vol. 1, No. 1, pp. 22-31. https://journal.srnintellectual.com/index.php/ijgoia/article/view/10/9

6. Phanphet, S., Suttipong, R., Wangmai, A., Sukprasert, N., Chattinnawat, W. (2022) ***Factor Affecting Elderly Consumer Testing on Thai Herb Ceramic Massage Product using Taguchi Design of Experiments***, International Journal of Global Optimization and Its Application, Vol. 1, No. 1, pp. 32-38. https://journal.srnintellectual.com/index.php/ijgoia/article/view/11/10

7. Jantarasaka, K., Chattinnawat, W. (2022) ***Designing Quality Improvement and Economical Production Quantity: Application of Material Flow Cost Accounting and Cost of Quality***, International Journal of Global Optimization and Its Application, Vol. 1, No. 1, pp.49-57. https://journal.srnintellectual.com/index.php/ijgoia/article/view/8/7

8. Boonmee, C., Pisutha-Arnond, N., Chattinnawat, W., Muangwong, P., Nobnop, W., Chitapanarux, I. (2021) ***Decision Support System for Radiotherapy Patient Scheduling: Thai Cancer Center Case Study***, ICMHI 2021: 2021 5th International Conference on Medical and Health InformaticsMay 2021 Pages 168–175. https://doi.org/10.1145/3472813.3473185

9. Wisittipanich, W., Boonmee, C., Khwanngern, K., Chattinnawat, W., & Woschank, M. (2021). A MATHEMATICAL MODEL FOR MULTI-PERIOD SURGICAL SCHEDULING WITH CAPACITY CONSTRAINT. Journal of Advanced Manufacturing Technology (JAMT), 15(2).47-56. https://jamt.utem.edu.my/jamt/article/view/6163

10. Tansurat, W., Chattinnawat, W. (2020). ***Analysis of Supply Chain Network Design Model with Quality Cost***, Proceedings of 2019 the 9th International Workshop on Computer Science and Engineering, WCSE 2019, Pages 565-572. https://www.scopus.com/record/display.uri?eid=2-s2.0-85081096150&origin=inward&txGid=d62b9feb99d889f18009007e73b6f095
11. Youngin, A. and Chattinnawat W. (2019). Integrated Quality and Material Flow Cost Accounting (MFCA) Analysis of Production System, Journal of Traffic and Logistics Engineering, Vol. 7, No. 2, 59-73. http://www.jtle.net/uploadfile/2019/1211/20191211041855180.pdf
12. W Glińi, W. Nitkiewicz, T., Chattinnawat, W. (2019) ***Demand for competences of industrial engineering graduates in the context of automation of manufacturing processes, Quality Production Improvement***, Vol. 1, issue 1, pp. 193-200. file:///C:/Users/IE-NB-LN01/Downloads/Glin%20W.pdf
13. Chattinnawat, W., Suriya, W., Jindapanpisan, P. (2018). ***Application of MFCA with LEAN to Improve Pajama Production Process: A Case Study of Confederate International Co., Ltd***. In: Lee, KH., Schaltegger, S. (eds) Accounting for Sustainability: Asia Pacific Perspectives. Eco-Efficiency in Industry and Science, Vol 33. Springer, Cham. https://doi.org/10.1007/978-3-319-70899-7_9
14. Supakulwattana, S. and Chattinnawat, W. (2018) ***The Implementation of Material Flow Cost Accounting Analysis to Determine the Optimal Sample Size and Lot Size in Serial Multistage Processes***, Proceedings of the International Conference on Industrial Engineering and Operations Management, Bandung, Indonesia, pp. 1115-1126. http://ieomsociety.org/ieom2018/papers/316.pdf.
15. Tran, K.P., Nguyen, H.D., Nguyen, Q. T., Chattinnawat, W. (2018) ***One-sided synthetic control charts for monitoring the coefficient of variation with Measurement Errors***, 2018 IEEE international conference on industrial engineering and engineering management (IEEM), 1667-1671. DOI: 10.1109/IEEM.2018.8607320.
16. Chattinnawat, W., Bilen C. (2017) ***Performance Analysis of Hotelling T2 under Multivariate Inspection Errors,*** Quality Technology and Quantitative Management, an international refereed journal, pp. 249-268, Vol.14, Issue 3. https://doi.org/10.1080/16843703.2016.1208494
17. Bilen, C., Khan, A., Chattinnawat, W*. (2017) ***Dual Monitoring Scheme for Multivariate Autocorrelated Cascade Processes with EWMA and MEWMA Charts***, Quality Technology and Quantitative Management, an international refereed journal, pp.1 156-177, Vol. 14. https://doi.org/10.1080/16843703.2016.1208488
18. Chattinnawat, W. (2015) ***Statistical Tolerance Design to Minimize Dual-Responses of APFA Height Deviations with Tolerance Cost-Quality Loss Model***, International Journal of Quality and Reliability Management, Vol. 32 Iss: 5, pp.434 - 455. https://doi.org/10.1108/IJQRM-06-2013-0096.
19. Chattinnawat, W. (2013) ***Investigating Design of Zero Acceptance Single Sampling Plans with Inspection Errors***, International Journal of Quality and Reliability

Management, Vol. 30 Issue 6, pp.662 - 674. https://doi.org/10.1108/02656711311325610.

20. Chattinnawat, W. (2011) ***Experimental Evaluation of GD&T for HDD Arm***, Chiang Mai University Journal Special Issue on Manufacturing Technology. Vol.10(1), pp. 61-66.
21. Chattinnawat, W. (2011) ***Analysis of Inspection System based on Zero Acceptance Plans with Inspection Errors***, Chiang Mai University Journal Special Issue on Manufacturing Technology. Vol.10(1), pp. 67-72.
22. Wiwat Singsai, Wichai Chattinnawat, Uttapol Smutkupt (2011), ***Application of Reverse Engineering Technique to Designing Manufacturing Process of Open Clamp Type Bone Fastening Device***, Chiang Mai University Journal of Natural Science, Vol. 10, No. 1, pp. 73-80.
23. Pipat Muenpeng, Wichai Chattinnawat, Uttapol Smutkupt (2011), ***Application of Reverse Engineering Techniques in the Design of a Manufacturing Process for Self-Tapping Schanz Screws: Phase1***, Chiang Mai University Journal of Natural Science, Vol. 10, No. 1, pp. 81-89.
24. Chattinnawat, W. (2009). ***The Demerit-based Control Chart for Trinomial Distribution***. International Journal of Quality and Reliability. Volume 26, Issue 5, pp. 426-448. https://doi.org/10.1108/02656710910956175

Ongoing Research

Dr. Wichai Chattinnawat holds Ph.D. and M.S. in Industrial Engineering, and a M.S. in Statistics from Oregon State University. His researches focus on statistical process control, quality engineering, applied statistics for quality improvement and production system. Dr. Wichai's research covers the sustainable design of quality and productivity system especially through the Material Flow Cost Accounting (MFCA) with applications in Industry and food sector. Appointed as MFCA expert, Dr. Wichai has conducted MFCA researches in Thailand and Bangladesh through support of Asian Productivity Organization (APO) and provided consulting how to apply the MFCA to reduce cost and improve efficiency. Recently, the project on Material Flow Cost Accounting (MFCA) in Sugar Production for Bangladesh Sugar & Food Industries Corporation (BSFIC) started on January 2020 and finished by December 2021has been publicized by APO and National Productivity Organization of Bangladesh on the implementation, knowledge and knowhow of the MFCA for sugar mills.

Dr.Wichai has published papers on the quality improvement and extending research into the quality and productivity management of healthcare system. He has involved in several projects of Lean improvement for hospital supported by National Science and Technology Development Agency (NSTDA).

Dr.Wichai also participates and active on the community engagement project of Chiang Mai University and supported by National Research Council of Thailand (NRCT). Dr. Wichai has completed several projects and publish papers on how to improve the performance of One Tambol One Product (OTOP), and also sustainable quality management for agriculture for the highland area.