



Dr. Poramate Tarasak

Tel: +66-91-696-3302
Email: poramate.tar@mahidol.ac.th

Current: Lecturer at Institute for Innovative Learning, Mahidol University, Nakhonpathom, Thailand

Work Experience

Infozense Co. Ltd. : Freelance Partner/Solution Consultant
True Corporation PCL. : Engineering Expert, Executive BD Manager
SAS Software (Thailand) : Education Specialist
Institute for Infocomm Research, Singapore : Scientist I, Research Fellow
NECTEC : Researcher
KAIST, Korea : Postdoctoral Fellow
Telesat Co. Ltd. : Network Engineer

Education

May 2004 University of Victoria, Victoria, BC, Canada
Ph.D., Electrical Engineering
December 1999 Asian Institute of Technology (AIT), Pathumthani, Thailand
Master of Engineering, Telecommunications
April 1997 Chulalongkorn University, Bangkok, Thailand
Bachelor of Engineering, Electrical Engineering

Knowledge and Skills

- AI Engineering: Microsoft Certified: Azure AI Engineer Associate
- Data Science: Microsoft Certified: Azure Data Scientist Associate
- Cloud Computing: AWS Certified Solution Architect Associate
- AI Tool: ChatGPT
- Programming: Python, HTML/CSS, PHP, SQL, SAS, C++, MATLAB
- Operating Systems: MS Windows, Ubuntu

Research Interest: Educational Technology, Augmented Reality, Artificial Intelligence, Wireless Communications

Publication List

Past 5-year

S. Sajjapanroj, P. Tarasak, and P. Longpradit, “Fostering Growth: A Micro-Learning Chatbot for Classroom Research Knowledge Acquisition Among In-Service Teachers,” in Proc. *WAIE2023*, September 2023 (Best Presentation Paper Award).

Past

Journal Publications

1. P. Tarasak, C.C. Chai, Y.S. Kwok, S.W. Oh, “Demand Bidding Program and Its Application in Hotel Energy Management,” *IEEE Transactions on Smart Grid*, vol. 5, no. 2, pp. 821-828, March 2014.
2. W.Qiu, P. Tarasak, H. Minn, “Orthogonal Multicarrier Division Multiple Access for Multipoint-to-Multipoint Networks,” *IEEE Transactions on Communications*, vol. 61, no. 9, pp. 3841-3853, September 2013.
3. P. Tarasak, T. Q. S. Quek, and F. Chin, “Uplink Timing Misalignment in Open and Closed Access OFDMA Femtocell Networks,” *IEEE Communications Letters*, vol. 15, no. 9, pp. 926-928, September 2011.
4. P. Tarasak, Z. Lin, X. Peng and F. Chin, “Suboptimal Partial Transmit Sequence-Active Interference Cancellation with Particle Swarm Optimization,” *EURASIP Journal on Wireless Communications and Networking*, vol. 2010, Article ID 151057, 9 pages, 2010.
5. P. Tarasak, K.B.-Png, X. Peng and F. Chin, “Design and Performance Cyclic Delay Diversity in UWB-OFDM Systems,” *EURASIP Journal on Wireless Communications and Networking*, vol. 2008, Article ID 541478, 8 pages, 2008.
6. H. Minn and P. Tarasak, “Improved Maximum Likelihood Frequency Offset Estimation Based on Likelihood Metric Design,” *IEEE Transactions on Signal Processing*, vol. 54, pp. 2076-2086, June 2006.
7. P. Tarasak, H. Minn and V.K. Bhargava, "Differential Modulation for Two-User Cooperative Diversity Systems", *IEEE Journal Selected Areas in Communications*, Special Issue on Differential and Noncoherent Wireless Communications, pp. 1891-1900, September 2005.
8. P. Tarasak and V. K. Bhargava, “Analysis and Design Criteria for Trellis-Coded Modulation with Differential Space-Time Transmit Diversity”, *IEEE Transactions on Wireless Communications*, vol. 3, no. 5, pp. 1374-1378, September 2004.
9. P. Tarasak, H. Minn and V. K. Bhargava, “Improved Approximate Maximum-Likelihood Receiver for Differential Space-Time Block Codes over Rayleigh Fading Channels”, *IEEE Transactions on Vehicular Technology*, vol. 53, no. 2, pp. 461-467, March 2004.

10. P. Tarasak, H. Minn and V. K. Bhargava, "Linear Prediction Receiver for Differential Space-Time Block Codes with Spatial Correlation", *IEEE Communications Letters*, vol. 7, no. 11, pp. 543-545, November 2003.
11. P. Tarasak and V. K. Bhargava, " $\pi/4$ -Shifted Differential QPSK Space-Time Block Codes", *Electronics Letters*, vol. 39, no. 18, pp. 1327-1329, 4 September 2003.
12. P. Tarasak and N. Rajatheva, "Upper Bound on the Bit Error Probability of TCM over Frequency-Selective Rayleigh Fading Channel", *Electronics Letters*, vol. 35, no. 21, pp. 1820-1821, 14 October 1999.

International Conference Publications

1. P. Tarasak, K. Adachi, and S. Sun, "Cell Selection for TDD Two-Tier Cellular Networks based on Uplink-Downlink Capacity," in Proc. *IEEE Wireless Communications and Networking Conference (WCNC)*, 7-10 April 2013.
2. P. Tarasak and H. Minn, "Resource Allocation for Multipoint-to-Multipoint Orthogonal Multicarrier Division Duplexing," in Proc. *IEEE Global Communications Conference (GLOBECOM)*, 3-7 December 2012.
3. P. Tarasak, S.E. Nai, T.Q.S. Quek, and F. Chin, "Location-Based Transmit Power Control for Femtocell Access Points," in Proc. *IEEE ICC2012 – 1st International Workshop on Small Cell Wireless Networks (SmallNets)*, 15 June 2012.
4. P. Tarasak, "Optimal Real-Time Pricing under Load Uncertainty based on Utility Maximization for Smart Grid," in Proc. *IEEE International Conference on Smart Grid Communications (SmartGridComm)*, pp. 339-344, 17-20 October 2011.
5. P. Tarasak and T. Q.S. Quek, "Throughput and Fairness of Femtocell Users in OFDM Macrocell-Femtocell Networks," in Proc. *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, pp. 182-186, 11-14 September 2011.
6. P. Tarasak and S. Sun, "Resource Allocation for Downlink Two-User OFDMA Systems with Wireless Network Coding," in Proc. *IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, pp. 182-186, 26-29 June 2011.
7. P. Tarasak, Q.S. Quek, and F. Chin, "Closed Access OFDMA Femtocells under Timing Misalignment," in Proc. *IEEE Global Communications Conference (GLOBECOM)*, 6-10 December 2010.
8. P. Tarasak and S. Sun, "Opportunistic Scheduling for Wireless Network Coding on Two-User OFDMA Systems," in Proc. *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, 26-30 September 2010.
9. U. Sethakaset, Q.S. Quek, S. Sun, P. Tarasak, "Distortion Behavior of Amplify-and-Forward Cooperative System with Layered Broadcast Coding," in Proc. *IEEE Vehicular Technology Conference (VTC)*, 16-19 May 2010.
10. P. Tarasak, U. Sethakaset and S. Sun, "Analysis of Opportunistic Scheduling for Wireless Network Coding : Nonidentical Two-User Case," in Proc. *IEEE Global Communications Conference (GLOBECOM)*, 30 November – 4 December 2009.
11. P. Tarasak, Z. Lin, X. Peng and F. Chin, "Partial Transmit Sequence-Active Interference Cancellation for UWB OFDM Transmission," in Proc. *IEEE Personal, Indoor and Mobile Radio Communications Symposium (PIMRC)*, 13-16 September 2009.

12. P. Tarasak, U. Sethakaset and S. Sun, "Capacity Analysis of Two-User Opportunistic Scheduling for Wireless Network Coding," in Proc. *IEEE International Symposium on Information Theory (ISIT)*, pp. 2572-2576, 28 June – 3 July 2009.
13. P. Tarasak, Z. Lin, X. Peng and F. Chin, "Performance Evaluation of Fast Frequency Hopping OFDM over UWB Channels," in Proc. *IEEE Vehicular Technology Conference (VTC)*, 26-29 April 2009.
14. P. Tarasak and S. Sun, "Joint Cooperative Diversity and Proportional Fairness Scheduling in OFDMA Relay Systems," in Proc. *IEEE Vehicular Technology Conference (VTC)*, 20-24 September 2008.
15. P. Tarasak, Z. Lin, X. Peng and F. Chin, "Fast Frequency Hopping OFDM with QR-based Receivers," in Proc. *IEEE Vehicular Technology Conference (VTC)*, 20-24 September 2008.
16. P. Tarasak, F. Chin, Z. Lin, and X. Peng, "Further Enhancement for Active Interference Cancellation on MB-OFDM UWB Transmission," in Proc. *IEEE Vehicular Technology Conference (VTC)*, 20-24 September 2008.
17. P. Tarasak, X. Peng and F. Chin, "Complexity Reduction of Adaptive T-Algorithm on UWB OFDM Systems," in Proc. *IEEE Radio and Wireless Conference (RAWCON)*, pp. 25-28, 22-24 January 2008.
18. P. Tarasak, K.-B. Png, and X. Peng, "Performance Analysis of Cyclic Delay Diversity on UWB OFDM Systems," in Proc. *6th Int. Conf. on Information, Communications and Signal Processing (ICICS)*, pp. 1-5, 10-13 December 2007.
19. P. Tarasak and Y. H. Lee, "Joint Cooperative Diversity and Scheduling in OFDMA Relay Systems," in Proc. *IEEE Vehicular Technology Conference (VTC)*, pp. 980-984, 11-15 March 2007.
20. P. Tarasak and Y. H. Lee, "Multihop Performance of Geographic Random Forwarding (GeRaF) under Lognormal-Shadowed Rician Channels," in Proc. *Fifth Int. Conf. on Information, Communications and Signal Processing (ICICS)*, pp. 1499-1503, 6-9 December 2005.
21. P. Tarasak, H. Minn and Y.H. Lee, "Analysis of Incremental Relaying Protocol with RCPC in Cooperative Diversity Systems," in Proc. *IEEE Vehicular Technology Conference (VTC)*, 25-28 September 2005.
22. H. Minn and P. Tarasak, "Improved Maximum Likelihood Frequency Offset Estimation Based on Likelihood Metric Design," in Proc. *IEEE International Conference on Communications (ICC)*, 16-20 May 2005.
23. P. Tarasak, H. Minn and V. K. Bhargava, "Differential Modulation for Two-User Cooperative Diversity Systems", in Proc. *IEEE Global Communications Conference (GLOBECOM)*, vo. 5, pp. 3389-3393, 29 November-3 December 2004.
24. D. V. Djonin, P. Tarasak, V. K. Bhargava, "On the Influence of the Power Profile on Diversity Combining Schemes," in Proc. *IEEE Global Communications Conference (GLOBECOM)*, vol. 3, pp. 1659-1663, 1-5 December 2003.
25. P. Tarasak and V. K. Bhargava, "On Differential Space-Time Block Codes without Constellation Expansion", in Proc. *IEEE Pacific Rim Conference on Communications, Computers, and Signal Processing (PACRIM)*, vol. 1, pp. 380-383, 28-30 August 2003.
26. P. Tarasak, H. Minn and V. K. Bhargava, "Multistage receiver for differential space-time block codes", in Proc. *IEEE International Conference on Communications (ICC)*, vol. 5, pp. 3155-3159, 11-15 May 2003.

27. H. Minn, P. Tarasak and V. K. Bhargava, "Some Issues of Complexity and Training Symbol Design for OFDM Frequency Offset Estimation Methods based on BLUE Principle", in *Proc. IEEE Vehicular Technology Conference (VTC)*, vol. 2, pp. 1288-1292, 22-25 April 2003.
28. H. Minn, P. Tarasak and V. K. Bhargava, "OFDM Frequency Offset Estimation Based on BLUE Principle", in *Proc. IEEE Vehicular Technology Conference (VTC)*, vol. 2, pp. 1230-1234, 24-28 September 2002.
29. P. Tarasak and V. K. Bhargava, "Reduced Complexity Multiple Symbol Differential Detection of Space-Time Block Code", in *Proc. IEEE Wireless Communications and Networking Conference (WCNC)*, vol. 1, pp. 505-509, 17-21 March 2002.
30. P. Tarasak and N. Rajatheva, "Comparison of TCM and BCM Schemes on Frequency-Selective Rayleigh Fading Channels with Soft-Output Algorithms", in *Proc. IEEE International Conference on Communications (ICC)*, vol. 2, pp. 749-753, 18-22 June 2000.

Book Chapter

P. Tarasak and T. Methathikom, "Turbo Codes in Broadband Wireless Access Based on the IEEE 802.16 Standard," in *Turbo Code Applications: A Journey from a Paper to Realization*, Springer, 2005.