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Vita

Dr. Da-Wei Wang received a B.S. and a M.S. in information engineering and computer science from National Taiwan University in 1985 and 1987 respectively. He received a Ph.D in computer science from Yale University in 1992. Since December 1992 he joined the institute as an assistant research fellow. He is currently a Research Fellow and Deputy Director in Institute of Information Science.

His research interest is in the theoretical foundation of computer science and in applying fundamental tools to various areas, including graph theory, design and analysis of algorithms, medical informatics and theory of distributed computing, and information privacy and security.

Education

Ph.D. program in Computer Science   1987—1992
    Yale University, New Haven, CT
    Thesis: "Sequence Transmission Problem"
    Advisor: Lenore Zuck

Master of Science in Computer Science   1985—1987
    National Taiwan University, Taipei, Taiwan
    Thesis: "On geometric location problem"

Advisor: Yue-Sun Kuo

Bachelor of Science in Computer Science National Taiwan University, Taipei, Taiwan	1981—1985

Employment

Institute of Information Science, Academia Sinica Research Fellow	2007—
Institute of Information Science, Academia Sinica Deputy Director	2018—
Computing Center, Academia Sinica Director	2010—2017
Taiwan Association of Medical Informatics Since President	2011—2014
Institute of Information Science, Academia Sinica Deputy Director	2007—2009
Institute of Information Science, Academia Sinica Associate Research Fellow	2000—2007
Institute of Information Science, Academia Sinica Assistant Research Fellow	1992—2000
University of Delaware Assistant Professor	1991—1992
Yale University Research Assistant	1987—1991
Institute of information science, Academic Sinica Research assistant	1985—1987

Awards

IBM graduate fellowship (1989—1991)

Journal Publications:

1. Tun-Wei Hsu, Jong-Ling Fuh, Da-Wei Wang, Li-Fen Chen, Chia-Jung Chang, Wen-Sheng Huang, Hsiu-Mei Wu & Wan-Yuo Guo, "Disrupted metabolic connectivity in dopaminergic and cholinergic networks at different stages of dementia from 18F-FDG PET brain persistent homology network," scientific reports, volume 11, number 5396, pages 1-12, March 2021.

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3. Hung-Jui Chang, Yu-Hsuan Hsu, Chih-Wen Hsueh, Mei-Lien Pan, Hsiao-Mei Tsao, Da-Wei Wang, Tsan-sheng Hsu, "Faster in Time and Better in Randomness Algorithms for Matching Subjects with Multiple Controls," International Journal on Advances in Software, volume 12, number 3 & 4, pages 249--258, December 2019.

4. Zong-De Jian, Tsan-sheng Hsu, and Da-Wei Wang, "Applying Deep Learning for Surrogate Construction of Simulation Systems," In: Obaidat M., Ören T., Merkuryev Y. (eds) Simulation and Modeling Methodologies, Technologies and Applications. SIMULTECH 2017. Advances in Intelligent Systems and Computing, volume 873, Pages 335-350 Springer, Cham, 2019.

5. Zong-De Jian, Tsan-sheng Hsu, and Da-Wei Wang, "The Power Of Surrogate-assisted Evolutionary Computing In Searching Vaccination Strategy," In: Obaidat M., Ören T., Merkuryev Y. (eds) Simulation and Modeling Methodologies, Technologies and Applications. SIMULTECH 2016. Advances in Intelligent Systems and Computing, volume 676, Pages 222-240 Springer, Cham, 2018.

6. Chien Hua Wu, Ruey Kei Chiu, Hong-Mo Yeh, and Da-Wei Wang, "Implementation Of A Cloud-based Electronic Medical Record Exchange System In Compliance With The Integrating Healthcare Enterprise's Cross-enterprise Document Sharing Integration Profile," International Journal of Medical Informatics, volume 107, pages 30-39, September 2017.

7. Chien-Chou Chen, Jen-Hsiang Chuang, Da-Wei Wang, Chien-Min Wang, Bo-Cheng Lin, and Ta-Chien Chan, "Balancing geo-privacy and spatial

patterns in epidemiological studies," Geospatial Health, volume 12, number 2, pages 294-299, August 2017.

8. Hsiao-Mei Tsao, Mei-Lien Pan, Ean-Wen Huang, Da-Wei Wang*, "Experience from National Medical Informatics Policy: Using the Example of Epidemic Prevention and Control Project " Taiwan Association for Medical Informatics, 15A-04, 2016.

9. T.-s. Hsu, C.J. Liau, and D.W. Wang, "A logical framework for privacy-preserving social network publication," *Journal of Applied Logic*, volume 12, number 2, pages 151-174, June 2014.

10. Chia-Tung Kuo, Da-Wei Wang and Tsan-sheng Hsu, "Simple and efficient algorithms to get finer resolution in a stochastic discrete time agent-based simulation," Simulation and Modeling Methodologies, Technologies and Applications Advances in Intelligent Systems and Computing, volume 256, pages 97-109, 2014.

11. Ting-Yu Liu, Yu Chen, Huai-Hsien Wang, Yen-Lin Huang, Yuan-Chun Chao, Kun-Tong Tsai, Wei-Chih Cheng, Chih-Yuan Chuang, Yi-Ho Tsai, Chung-Yueh Huang, Da-Wei Wang, Chi-Hung Lin, Juen-Kai Wang, and Yuh-Lin Wang, "Differentiation of Bacteria Cell Wall Using Raman Scattering Enhanced by Nanoparticle Array," Journal of Nanoscience and Nanotechnology, volume 12, number 6, pages 5004-5008, June 2012.

12. Yang-chih Fu, Da-Wei Wang, Jen-Hsiang Chuang, "Representative Contact Diaries for Modeling the Spread of Infectious Diseases in Taiwan," PLoS ONE, volume 7, number 10, pages e45113, October 2012.

13. Kung Chen, Yuan-Chun Chang, Da-Wei Wang, "Aspect-oriented design and implementation of adaptable access control for Electronic Medical Records," International Journal of Medical Informatics, volume 79, number 3, pages 181-203, March 2010.

14. M.T. Tsai, T.C. Chern, J.H. Chuang, C.W. Hsueh, H.S. Kuo, C.J. Liau, S. Riley, B.J. Shen, C.H. Shen, D.W. Wang, T.-s. Hsu, "Efficient simulation of the spatial transmission dynamics of influenza," PLoS ONE, volume 5, number 11, pages e13292, Novenber 2010.

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March 2009, doi:10.1016/j.jpdc.2008.10.001.

17. Ting-Ting Liu, You-Hsuan Lin, Chia-Sui Hung, Tian-Jiun Liu, Yu Chen, Yung-Ching Huang, Tsung-Heng Tsai, Huai-Hsien Wang, Da-Wei Wang, Juen-Kai Wang, Yuh-Lin Wang, and Chi-Hung Lin, "A high speed detection platform based on surface-enhanced Raman scattering for monitoring antibiotic-induced chemical changes in bacteria cell wall," PloS ONE, volume 4, pages e5470-1 ~ e5470-10, 2009.

18. Pang-Feng Liu, May-Chen Kuo, and Da-Wei Wang, "An Approximation Algorithm and Dynamic Programming for Reduction in Heterogeneous Environments," Algorithmica, volume 53, number 3, pages 425-453, 2009.

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22. I-C. Wang, C.-H. Shen, T.-s. Hsu, C.J. Liau, D.W. Wang, and J. Zhan, "Towards empirical aspects of secure scalar product," IEEE Transactions on Systems, Man, and Cybernetics Part C: Applications and Reviews, volume 39, pages 440-447, July 2009.

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number 5, pages 1198-1206, May 2006.

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Association for Medical Informatics, number 10, pages 71-84, December 1999.

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41. Xiao Yun Lu, Da-Wei Wang, C.K Wong, "On Avoidable and Unavoidable Claws," Discrete Mathematics, volume 184, pages 259-265, 1998.

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11. Yi-ting Chiang, Tsan-sheng Hsu, Churn-Jung Liau, Yun-Ching Liu, Chih-hao Shen, Da-Wei Wang and Justin Zhan, "An Information-Theoretic

Approach for Secure Protocol Composition," *10th International Conference on Security and Privacy in Communication Networks (SecureComm)*, European Alliance for Innovation, September 2014.

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13. Kung Chen, Tsan-Sheng Hsu , Churn-Jung Liau, Da-Wei Wang, "A scripting language for automating secure multiparty computation," *Proceedings of the 8th Asia Joint Conference on Information Security (AsiaJCIS)*, pages 586-594, August 2013.

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15. Y.-C. Liu, Y.-T. Chiang, T.-s. Hsu, C.-J. Liau, and D.-W. Wang, "Floating point arithmetic protocols for constructing secure data analysis application," Proceeedings of the 17th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES), volume 22, pages 152-161, September, 2013.

16. T.-s. Hsu, C.J. Liau and D.W. Wang, "Privacy-preserving social network publication based on positional indiscernibility," Proceedings of the 7th International Conference on Scalable Uncertainty Management (SUM), Lecture Notes in Artificial Intelligence, Washington DC Area, USA, 8078, pages 311-324, September, 2013.

17. W.-C. Cheng, Y. Chen, Y.-M. Deng, T.K. Jan, W.N. Lian, H.H. Wang, C.-H. Lin, Y.-L. Wang, J.-K. Wang, D.-W. Wang, J. Twu, R. Jou, "Species Identification and Drug resistance Determination of Mycobacteria Using Raman Spectroscopy," 23rd European Congress of Clinical Microbiology and Infectious Diseases, April, 2013.

18. T.-s. Hsu, C.J. Liau and D.W. Wang, "A probabilistic hybrid logic for sanitized information systems," Proceedings of the 6th International Conference on Scalable Uncertainty Management (SUM), Lecture Notes in Computer Science, 7520, pages 500-513, September, 2012.

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technique to adjust the time step size in a stochastic discrete agent-based simulation," Proceedings of the 2012 International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), pages 42-48, September, 2012.

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