

Curriculum Vitae
of
Ying-Hong Wang (王英宏)

Department of Computer Science and Information
Engineering
Tamkang University
Tamsui, Taipei Hsien, 25137, Taiwan, R.O.C.

Fax: +886-2- 26209749
Phone: +886-2-26238592 (O)
E-mail: inhon@mail.tku.edu.tw
<http://mail.tku.edu.tw/inhon>



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Dr. Wang is a professor in Department of Computer Science and Information Engineering of Tamkang University since 1996. He received the B.S. degree in Information Engineering from Chung-Yuan University, and the M.S. and Ph.D. degrees in Information Engineering from the Tamkang University, in 1992 and 1996, respectively. From 1988 to 1990, he worked in the Product Development Division of Institute of Information Industry (III). From 1992 to 1996, he was a lecturer in the department of computer science and information engineering of Tamkang University. From August 1st, 1996 to January 31, 2008, he was an associate professor in the department of computer science and information engineering of Tamkang University. He promoted to be a professor of the department of computer science and information engineering of Tamkang University from February First, 2008. From August 1st, 2004 to July 31, 2008, he served as Chairman of the department of computer science and information engineering, Tamkang University. From February 1st, 2014 to now, he serves as the Chief of Distance Education Development Section. His current research interests are Wireless Communication, Mobile Agent Technologies, Software Engineering, and Multimedia Database System. He has nearly 100 technological papers published on International journals and International conference proceedings, he also join many International activities been program committee, workshop chair, session chair and so on. He had been invited as Visiting Researcher in The University of Aizu, Japan, from Jan to March 2002. He is the Adjunct Professors of Beijing Jiaotong University, Shanghai University, and Hefei University of Technology China, starting from April 2007, September 2010, and July 2011, respectively. The contact address of Professor Wang is: Department of Computer Science and Information Engineering, Tamkang University, Tamshui, Taipei Hsien, 25137, Taiwan, R. O. C.

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Phone: +886-2- 26238592 (O)
e-mail: inhon@mail.tku.edu.tw
<http://inhon.tkse.tku.edu.tw>

Education (學歷)

Ph.D. in Information Engineering, Tamkang University, Taiwan, 1993 - 1996
MS in Information Engineering, Tamkang University, Taiwan, 1990 - 1992
BS in Information Engineering, Chung Yuan University, Taiwan, 1982 - 1986

Teaching and Industrial Experiences (經歷)

Professor of Computer Science and Information Engineering, Tamkang Univ., Feb. 2008-Date
Chief of Distance Education Development Section, Tamkang Univ., Feb. 2014 - Date
Department Chair of Computer Science and Information Engineering, Tamkang Univ., Aug. 2004-July 2008
Associate Professor of Computer Science and Information Engineering, Tamkang Univ., Aug. 1996 – Jan. 2008
Lecturer of Computer Science and Information Engineering, Tamkang University, Taiwan, Aug. 1992 - July 1996
Software Engineer, Institute of Information Industry, Taiwan, Sept. 1988 - Oct. 1990

Professional Activity (國際交流活動)

Chair:

1. Session chair of 1997 International Conference on Systems Research, Informatics and Cybernetics
2. Session Co-chair of 1997 IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC'97)
3. Session Chair of 1997 IEEE International Conference on Intelligent Processing System (IEEE ICIPS'97)
4. Local Arrangement Co-chair of The Fifth Pacific Workshop on Distributed Multimedia Systems (DMS'98)
5. Organizing Committee Chair of the 1999 National Computer Symposium (NCS99)
6. Program Chair of the 2000 International Conference on Computer Assisted Instruction and Internet Computing (CAIIC2000)

7. Session Chair of 2000 International Conference of Multimedia Software Engineering (MSE2000)
8. Session Chair of the 15th IEEE International Conference on Information Networking (IEEE ICOIN-15)
9. Program Committee Chair of the International Workshop on Agent Technologies over Internet Applications (ATIA2001) in conjunction with The Seventh International Conference on Distributed Multimedia Systems
10. Session Chair of the 3rd International Workshop on Multimedia Network System (MNS2001) in conjunction with the 21st International Conference on Distributed Computing System (ICDCS2001)
11. Arrangement Chair of Tamkang International Lecture Series on Parallel and Distributed Systems (Dec. 26~28, 2001)
12. Arrangement Chair of Tamkang International Lecture Series on Multimedia and Image Processing Systems (June 3~6, 2002)
13. Publicity Chair of The Seventh International Conference on Distributed Multimedia Systems (DSM2001)
14. Local Arrangement Co-Chair of The 5th Anniversary Event of NSC-NRC Collaborative Research
15. Local Arrangement Co-Chair of The 9th Conference on Multimedia Modeling (MMM2003), held at Tamkang University, Tamshui, Taiwan, From January 8 to 10, 2003
16. Awards Committee Co-Chair of 2003 International Conference on Advanced Information Networking and Applications (AINA2003) held at Xidian University, Xi'an, China from March 27 to March 29, 2003
17. Session Chair of the 4rd International Workshop on Multimedia Network Systems and Applications (MNSA2002) in conjunction with the 22nd International Conference on Distributed Computing System (ICDCS2002)
18. Publicity Chair of the 8th International Conference on Distributed Multimedia Systems (DMS2002) held on San Francisco, USA, in September 26-28, 2002
19. Session Chairs of the 2002 International Workshop on Internet Computing and Multimedia (IcaM2002) in conjunction with the 8th International Conference on Distributed Multimedia Systems (DMS2002) held at San Francisco, USA, in September 26-28, 2002
20. Workshop and Program Co-Chairs of The 5th International Workshop on Multimedia Network Systems and Applications (MNSA2003) in conjunction with the 23rd International Conference on Distributed Computing Systems (ICDCS-2003) held at Providence, Rhode Island, U.S.A, May/June, 2003
21. Program Area Chair of Mobile Communications of The 18th International Conference on Advanced Information Networking and Applications (AINA2004) held at Fukuoka, Japan, March 29-31, 2004
22. Local Arrangement Chair of The 2004 IEEE International Conference on Multimedia and Expo (ICME2004), held on Taipei, Taiwan, June 28-30, 2004
23. Finance Chair of The 2004 IEEE International Conference on Multimedia and Expo (ICME2004) held at Taipei, Taiwan, June 28-30, 2004
24. Registration Chair of 2005 The IEEE 19th International Conference on Advanced Information Networking and Applications (AINA2005) held at Tamshui, Taiwan, March 28-30, 2005
25. Associate Editor of the IASTED International Journal of Computers and Applications (EI), ACTA Press, started on December, 2004

26. Session Chairs of 2005 The IEEE 19th International Conference on Advanced Information Networking and Applications (AINA2005) held at Tamshui, Taiwan, March 28-30, 2005
27. Guest Editor of International Journal of Wireless and Mobile Computing (IJWMC), special issue on Wireless Sensors and Ad hoc Networks, 2005
28. Publication Co-Chair of The IEEE 20th International Conference on Advanced Information Networking and Applications (AINA2006) held at Vienna from April 18 to 20, 2006
29. Session Chair of the second Taiwan Conference on Software Engineering (TCSE2006), held at Taipei from June 9 to 10, 2006
30. Session Chair of the 2006 International Computer Symposium, held at Taipei from December 4-6, 2006
31. Program Co-Chair of The Third Conference of Wireless, Ad Hoc, and Sensor Network, held at Tamshui, Taipei County, Taiwan, September 6-7, 2007
32. Area Co-Chair of E-Commerce and Data Mining in TANET2007 (台灣網際網路研討會電子商務與網路探勘論文分組召集人), held at National Taiwan University, Taipei, Taiwan, October 23-25, 2007
33. Area Editor of Tamkang Journal of Science and Engineering, started on August, 2007
34. Workshop Chair of International Workshop on Software Technologies for Ubi-media Computing, conjunction with The First IEEE International Conference on Ubi-media Computing, held at Lanzhou University, China, July 15-16, 2008
35. Session Chair of The First IEEE International Conference on Ubi-media Computing, held at Lanzhou University, China, July 15-16, 2008
36. Program Chair of 2008 International Computer Symposium, held at Tamsui, Taipei county, Taiwan, November 13-15, 2008
37. Conference Co-Chair of The 13th Conference on Artificial Intelligence and Applications (TAAI2008), held at I-Lan, Taiwan, November 21-22, 2008
38. Session Chair x 2 of 2009 National Computer Symposium (NCS2009), held at San Shia, Taipei County, Taiwan, November 27-28, 2009
39. Conference Co-Chair of The 2009 Joint Conferences on Pervasive Computing(JCPC2009) – U-Media2009 and ICPCA2009, held at Tamsui, Taiwan, December 3-5, 2009
40. Session Chair of The 6th Workshop on Grid Technologies and Applications, held at TaiTung City, Taiwan, December 18-19, 2009
41. Session Chair of The 12th 2013 Conference on Information Technology and Applications in Outlying Islands (ITAOI2013), held at Kinmen, Taiwan, May 24-26, 2013
42. Executive Secretary of 2013 International Conference on Embedded and Multimedia Computing, held at Taipei City, Taiwan, August 23-25, 2013
43. Guest Editor of Special Issue on Embedded and Multimedia Computing, Journal of Computers

Visiting:

1. Visiting Researcher of the University of Aizu, the duration of visiting is from January 1 2002 to March 31 2002. Research Theme is Web-based Agent Systems supporting Applied Programming
2. Co-Advisor of School of Electroics and Information Engineering, Beijing Jiaotong University(北京交通大學電子信息學院研究生導師), China, start from 2007

- June 20 to 2010 June 19, Renew to 2013 November 11.
3. Adjunct Professor of Beijing Jiaotong University(北京交通大學兼職教授), China, start from 2007 April 10 to 2010 April 9
 4. Adjunct Professor of Shanghai University(上海大學兼職教授), China, start from 2010 September 1st to 2013 September 30th
 5. Adjunct Professor of HeFei University of Technology(合肥工業大學兼職教授), China, start from 2011 July 1st to date.
 6. Visiting Researcher of Beijing Jiaotong University(北京交通大學), China, start from 2012 October 1st to 2012 November 31st
 7. Visiting Researcher of the University of Washington (Funding by NSC, Taiwan), Seattle, USA, from 2013 July 1st to 2013 September 30th

Foreign Speaker:

1. Title “A Link Grammar-based Corpus Supports English Distance Learning”, to Department of Computer Software, The University of Aizu, Japan, 2003 January 20
2. Titles “Mobile Sink Routing Protocol with Registering in Cluster-based Wireless Sensor Networks” and “Adaptive MAP Selection Mechanism for HMIPv6” to School of Electroics and Information Engineering, Beijing Jiaotong University (北京交通大學), China, 2007 June 26
3. Title “An instantaneous Data Dissemination Mechanism with Mobile Sinks in Wireless Sensor Networks” to School of Computer and Information, Hefei University of Technology(合肥工業大學), China, 2010 November 9
4. Title “An instantaneous Data Dissemination Mechanism with Mobile Sinks in Wireless Sensor Networks” to School of Computing Engineering and Science, Shanghai University(上海大學), China, 2010 November 11
5. Title “**Apply Sequence Frequency Reuse Scheme to Enhance Coordinated Multi-Point Transmission in LTE-A**” to School of Electroics and Information Engineering, Beijing Jiaotong University (北京交通大學), China, 2012. November 1st.
6. Title “**Apply Sequence Frequency Reuse Scheme to Enhance Coordinated Multi-Point Transmission in LTE-A**” to School of to School of Computer and Information, Hefei University of Technology(合肥工業大學), China, 2012. November 13th.
7. Title “**TDAM : A Tree-based Data Aggregation Mechanism in Wireless Sensor Networks**” to school of Electroics and Information Engineering, Beijing Jiaotong University (北京交通大學), China, 2012. November 16th.
8. Title “**TDAM : A Tree-based Data Aggregation Mechanism in Wireless Sensor Networks**” to school of Information, RENMIN UNIVERSITY of CHINA (中國人民大學), China, 2012. November 28th.

Program Member:

1. Program Committee member of 2002 International Workshop on Multimedia Distance Education Systems and Technologies (MDEST2002) in conjunction with the 8th International Conference on Distributed Multimedia Systems (DSM2002)

- held at San Francisco, California, USA, from September 26 to 28, 2002
2. Program Committee member of 2002 International Workshop on Internet Computing and Multimedia (ICaM2002) in conjunction with the 8th International Conference on Distributed Multimedia Systems (DSM2002) held at San Francisco, California, USA, from September 26 to 28, 2002
 3. Program Committee of The 4th International Conference on Computer and Information Technology (CIT2004), held at Wuhan, China, September 14-16, 2004.
 4. Program Committee of Broadband and Wireless Networks Workshop conjunction to 2004 Symposium on Digital Life and Internet Technologies
 5. Program Committee of The First International Workshop on Ubiquitous Smart Worlds (USW2005) conjunction with AINA2005 held at Tamshui, Taiwan, March 28-30, 2005
 6. Program Committee of the Fourth International Conference on Intelligent Multimedia Computing and Networking (IMMCN 2005) conjunction with the Eighth Joint Conference on Information Sciences (JCIS 2005) held at Salt Lake City, Utah, USA, July 21-26, 2005
 7. Program Committee of The 7th International Workshop on Multimedia Network Systems and Applications (MNSA'2005) conjunction with The IEEE 25th International Conference on Distributed Computing Systems (ICDCS-2005), held at Columbus, Ohio, USA, June 6-9, 2005
 8. Program Committee of The 11th International Conference on Parallel and Distributed Systems (ICPADS-2005), held at Fukuoka Institute of Technology (FIT), Fukuoka, Japan, July 20-22, 2005
 9. Program Committee of The 12th Asia-Pacific Software Engineering Conference (APSEC2005), held at Taipei, Taiwan, Dec. 15-17, 2005
 10. Program Committee of the 2nd International Conference on Embedded Software and Systems (ICESS-2005), held at Xi'an, P.R.China, Dec. 16-18, 2005
 11. Program Committee of The Eighth International Conference on Humans and Computers (HC'2005), held at Aizu, Japan, August 31 - September 2, 2005
 12. Program Committee of The 3rd International Conference on Ubiquitous Intelligence and Computing (UIC-06), held at Wuhan and Three Gorges, China, September 3-6, 2006
 13. Program Committee of The 2nd Taiwan Conference on Software Engineering (TCSE2006), held at Taipei, Taiwan, June 9-10, 2006
 14. Program Committee of The Workshop on Computer Networks and Wireless Communications 2006, jointed to the International Computer Symposium 2006(ICS2006), held at Taipei, Taiwan, December 4-6, 2006
 15. Program Committee of The 4rd International Conference on Ubiquitous Intelligence and Computing (UIC-07), held at Hong Kong, China, July 11-13, 2007
 16. Program Committee of The 7th IEEE International Conference on Computer and Information Technology (CIT-07), held at Aizu, Japan, October 16-19, 2007
 17. Program Committee of The Third Taiwan Conference on Software Engineering (TCSE2007), held at Taichung, Taiwan, June 8-9, 2007
 18. Program Committee of The Third Taiwan E-Learning Forum (TWELF2007), held at Taichung, Taiwan, May 18-19, 2007
 19. Program Committee of The 8th IEEE International Conference on Computer and Information Technology (CIT-08), held at Sydney Australia, July 8-11, 2008
 20. Program Committee of the 4th International Symposium on Ubiquitous

- Applications & Security Services (UASS-09), held at Las Vegas, Nevada, USA, January 11-13, 2009
21. Program Committee of The Fourth Taiwan Conference on Software Engineering (TCSE2008), held at Tainan City, Taiwan, June 13-14, 2008
 22. Program Committee of The Fourth Workshop on Wireless Ad Hoc and Sensor networks (WASN 2008), held at Tainan City, Taiwan, September 4-5, 2008
 23. Program Committee of Taiwan Academic Network Conference 2008 (TANET2008), held at Kaohsiung County, Taiwan, October 20-22, 2008
 24. Program Committee of The Fifth Taiwan Conference on Software Engineering (TCSE2009), held at Tainan City, Taiwan, June 19-20, 2009
 25. Program Committee of The Fifth Workshop on Wireless Ad Hoc and Sensor networks (WASN 2009), held at Hsin Chu City, Taiwan, September 10-11, 2009
 26. Program Committee of the 2009 National Computer Symposium (NCS2009), held at San Shia, Taipei County, Taiwan, November 27-28, 2009
 27. Program Committee of The Sixth Taiwan Conference on Software Engineering and Object-Oriented Technology (TCSE2010), held at Chungli City, Taiwan, July 22-23, 2010
 28. Program Committee of The International Workshop on Mobile P2P, conjunction with the 6th International Wireless Communications and Mobile Computing Conference (IWCMC 2010), held at Caen, France, June 28–July, 2010
 29. Member of council of the Taiwan Software Engineering Society, started from Aug. 2008
 30. Member of a council of Taiwan Software Simulation Society, started from Aug. 2009
 31. Member of council of the Association of E-Learning, ROC, started from May, 2010
 32. Program Committee of The Sixth Workshop on Wireless Ad Hoc and Sensor networks (WASN 2010), held at Taipei City, Taiwan, September 2-3, 2010
 33. Program Committee of the Taiwan Academic Network Conference 2010 (TANET2010), held at Tainan City, Taiwan, October 27-29, 2010

Reviewer:

1. Reviewer of IEEE Globecom2002, held on Taipei, Taiwan, R.O.C. from November 17 to 21, 2002
2. Reviewer of Tamkang Journal of Science and Engineering: An International Journal, December, 2002
3. Reviewer of Information Sciences: An International Journal, March 2003
4. Reviewer of International Journal of Distance Education Technologies, May 2003
5. Reviewer of Journal of Internet Technology, July 2003
6. Reviewer of International Journal of Wireless and Mobile Computing, November 2003
7. Reviewer of Journal of Information Science and Engineering, April 2004
8. Reviewer of IEEE Transactions on Mobile Computing, August 2004
9. Reviewer of the Ninth Conference on Artificial Intelligent and Applications, August 2004
10. Reviewer of the Seventh Conference on Humans and Computers, August 2004
11. Reviewer of Data and Knowledge Engineering Journal, August 2004

12. Reviewer of the Ninth Conference on Artificial Intelligence and Applications, held on Taipei, Taiwan, November 5-6, 2004
13. Reviewer of the International Journal of Electrical Engineering, November 2004
14. Reviewer of 2005 The IEEE 19th International Conference on Advanced Information Networking and Applications (AINA2005) held on Tamshui, Taiwan, March 28-30, 2005
15. Reviewer of The 11th International Conference on Parallel and Distributed Systems (ICPADS-2005) held on Fukuoka, Japan, July 20-22, 2005
16. Reviewer of Tamkang Journal of Science and Engineering, February 2005
17. Reviewer of Tamkang Journal of Science and Engineering, April 2005
18. Reviewer of ACM Transactions on Internet Technology, April 2005
19. Reviewer of International Journal of Fuzzy Systems, April 2005
20. Reviewer of Tamkang Journal of Science and Engineering, May 2005
21. Reviewer of Tamkang Journal of Science and Engineering, July 2005(Two papers)
22. Reviewer of The Second International Symposium on Ubiquitous Intelligence and Smart Worlds (UISW2005) (Three papers) in conjunction with the IFIP International Conference on Embedded And Ubiquitous Computing (EUC'2005), held on Nagasaki, Japan, December 6-7, 2005
23. Reviewer of Tamkang Journal of Science and Engineering, August, 2005
24. Reviewer of The 12th Asia-Pacific Software Engineering Conference (APSEC2005), held at Taipei, Taiwan, Dec. 15-17, 2005
25. Reviewer of the 2nd International Conference on Embedded Software and Systems (ICCESS-2005), held at Xi'an, P.R.China, Dec. 16-18, 2005
26. Reviewer of International Journal of Computer Systems Science and Engineering, September 2005
27. Reviewer of ACM Transactions on Internet Technology, October 2005
28. Reviewer of International Journal of Distance Education Technologies (JDET), October 2005
29. Reviewer of International Journal of Distance Education Technologies (JDET), November 2005
30. Reviewer of International Journal of Distance Education Technologies (JDET), December 2005
31. Reviewer of Tamkang Journal of Science and Engineering, December 2005(Two papers)
32. Reviewer of International Journal of Distance Education Technologies (JDET), February 2006(Two papers)
33. Reviewer of Tamkang Journal of Science and Engineering, March 2006(Three papers)
34. Reviewer of International Journal of Distance Education Technologies (JDET), March 2006(Two papers)
35. Reviewer of Journal of Computer Communications, special issue on Sensor-Actuator Networks (SANETs), May 2006
36. Reviewer of International Conference on Computer Communications and Networks, 2006
37. Reviewer of International Journal of Ad-Hoc and Ubiquitous Computing, November 2006
38. Reviewer of The Workshop on Computer Networks and Wireless Communications 2006, jointed to the International Computer Symposium 2006(ICS2006), December 2006

39. Reviewer of The 4rd International Conference on Ubiquitous Intelligence and Computing (UIC-07), held at Hong Kong, China, July 11-13, 2007, 9 Papers
40. Reviewer of the Bulletin of National Pingtung Institute of Commerce, March 2007, 1 Paper
41. Reviewer of The Third Taiwan E-Learning Forum (TWELF2007), held at Taichung, Taiwan, May 18-19, 2007, 6 Papers
42. Reviewer of the Sixth International Conference on Computer and Information Technology(CIT2006), held in Aizu-Wakamatsu City, Japan, October 16-19, 2007, 8 Papers
43. Reviewer of TANET2007, held at National Taiwan University, Taipei, Taiwan, October 23-25, 2007, 3 Papers
44. Program Committee of The 3rd International Symposium on Ubiquitous Application and Security Service (UASS-08), in conjunction with AINA2008, held in GinoWan, Okinawa, Japan, March 25-28, 2008
45. Reviewer of The 3rd International Symposium on Ubiquitous Application and Security Service (UASS-08), in conjunction with AINA2008, held in GinoWan, Okinawa, Japan, March 25-28, 2008, 5 papers
46. Reviewers of The 8th IEEE International Conference on Computer and Information Technology (CIT-08), held at Sydney Australia, July 8-11, 2008, 8 Papers
47. Reviewer of IEEE Transaction on Vehicular Technology, May 2008, 1 Paper
48. Reviewer of International Journal of Computing & Information Technology, Nov. 2008, 2 Papers
49. Reviewer of IEEE Wireless Magazine, February 2009, 1 Paper
50. Reviewer of Journal of Information Science and Engineering, March 2009, 2 Papers
51. Reviewer of Tamkang Journal of Science and Engineering, March 2009, 1 Paper
52. Reviewer of Journal of Information Science and Engineering, April 2009, 1 Paper
53. Reviewer of the Conference of Knowledge Community (KC2009), May 2009, 22 Papers
54. Reviewer of The Fifth Taiwan Conference on Software Engineering (TCSE2009), held at Tainan City, Taiwan, June 2009, 6 Papers
55. Reviewer of the 2009 National Computer Symposium (NCS2009), held at San Shia, Taipei County, Taiwan, November 2009, 4 Papers
56. Reviewer of The International Workshop on Mobile P2P, conjunction with the 6th International Wireless Communications and Mobile Computing Conference (IWCMC 2010), held at Caen, France, June 28–July, 2010, 1 Paper
57. Reviewer of Tamkang Journal of Science and Engineering, February 2010, 1 Paper
58. Reviewer of IEEE Transaction on Vehicular Technology, March 2010, 1 Paper
59. Reviewer of of The Sixth Taiwan Conference on Software Engineering and Object-Oriented Technology (TCSE2010), held at Chungli City, Taiwan, July 22-23, 2010, 2 Papers
60. Reviewer of IET Communications, August 2010, 1 Paper
61. Reviewer of International Journal of Computer Networks, October 2010, 1 Paper
62. Reviewer of Journal Information Science and Engineering, November 2010, 1 Paper
63. Reviewer of International Journal on Sensor Networks, November 2010, 1 Paper
64. Reviewer of Journal of Sensors, December 2010, 1 Paper

65. Reviewer of IEEE Communication Letter, April 2011, 1 Paper
66. Reviewer of Journal of Computer Networks and Communications (JCNC), September 2011, 1 Paper
67. Reviewer of 2011 International Conference on Data and Knowledge Engineering (ICDKE2011), held at Milan, Italy, September 6-8, 2011, 1 Paper
68. Reviewer of The 26th IEEE International Conference on Advanced Information Networking and Applications (AINA-2012), held at Fukuoka, Japan, March 26-29, 2012, 3 Papers
69. Reviewer of 2012 IEEE International Symposium on Circuits and Systems (ISCAS2012), held at Seoul, Korea, May 20-23, 2012, 2 Papers
70. Reviewer of International Journal of Computational Science and Engineering (IJCSE), December 2011, 1 Paper
71. Reviewer of International Journal of Ad Hoc and Ubiquitous Computing (IAHUC), December 2011, 1 Paper

Publications (研究著作)

Journal Publications (學術期刊)

001. Chi-Ming Chung, Timothy K. Shih, Ying-Hong Wang, Wei-Chuan Lin, and Ying-Feng Kuo, "The Measurement of Software Complexity through Program Decomposition", International Journal of Information and Management Sciences (EI), Vol.6, No.3, Sept, 1995, pp. 69-86
002. Chi-Ming Chung, Timothy K. Shih, Chin-Hwa Kuo, and Ying-Hong Wang, "On the Construction of Intelligent Multimedia Presentations," Information Sciences: An International Journal (SCI, EI), Vol.89, No.1&2, Feb., 1996, pp. 131-155
003. Chi-Ming Chung, Ying-Hong Wang, Wei-Chuan Lin, Ying-Feng Kuo, and Jui-Fa Chen, "A Platform for CASE Environment," International Journal of Information and Management Sciences (EI), Vol.7, No.1, March, 1996, pp. 53-68
004. Chi-Ming Chung, Timothy K. Shih, Ying-Hong Wang, "A Quantitative Analysis for Different Testing Criteria through Program Decomposition," Information Sciences: An International Journal (SCI, EI), Vol.93, No.3&4, Sept. 1996, pp. 211-234
005. Chi-Ming Chung, Louis R. Chow, Timothy Shih, Ying-Hong Wang, Wei-Chuan Lin, and Jui-Fa Chen, "Tool Integration in a Knowledge Abstraction Environment," Information Sciences: An International Journal (SCI, EI), Vol. 105, No. 1-4, Mar. 1998, pp. 279-298
006. Chi-Ming Chung, Louis R. Chao, Timothy K. Shih, Ying-Hong Wang, Yuh-Long Shyy, Wei-Chuan Lin, "A Control and Data Abstraction Approach for Multimedia Presentation," the Journal of Chinese Institute of Electrical Engineering (EI), Vol. 5, No.3, Aug, 1998, pp. 265-276
007. Timothy K. Shih, Ying-Hong Wang, and Ying-Feng Kuo, "An Object-Oriented Specification and Verification System for Systolic Array Designs," International Journal of Computers and Their Applications, Vol. 5, No. 4, Dec. 1998, pp. 224-243
008. Timothy K. Shih, Huan-Chao Keh, Ying-Hong Wang, and Ying-Feng Kuo, "Temporal Properties Underlying Multimedia Presentations with Z Notations," Journal of Information Science and Engineering (SCI, EI), Vol. 15, No. 1, 1999, pp.107~129.
009. Ying-Hong Wang, Chi-Ming Chung and Hong-Zu Lin, "An Application

- Framework for Distributed Multimedia System Development," Tamkang Journal of Science and Engineering (EI), Vol. 2, No. 2, 1999, pp.79-84
010. Ying-Hong Wang, Chi-Ming Chung, Timothy Shih, Huan-Chao Keh, and Jui-Fa Chen, "The Complexity Measurement of Software through Program Decomposition," the International Journal of Computer Systems Science and Engineering (SCI, EI), Vol. 15, No.2, March 2000, pp.127~134.
 011. Ying-Hong Wang, "e-Learning for English based on Multimedia Database and Internet," Tamkang Journal of Science and Engineering - An International Journal(EI), Vol. 4, No. 1, March 2001, pp.19-36
 012. Ying-Hong Wang, and Chih-Hao Lin, "An Internet-based Distance Learning for English based on Multimedia Database," Journal of Internet Technology (SCI, EI), Vol.2, No.4, Oct. 2001, pp. 243-252
 013. Lawrence Y. Deng, Timothy K. Shih, and Ying-Hong Wang, "Floor Control Mechanism in Distributed Multimedia Presentation," Journal of Information Science and Engineering (SCI, EI), Vol. 18, No. 4, July 2002, pp. 489-506
 014. Timothy K. Shih, Gianni Degli Antoni, Timothy Arndt, Asirvatham Asirvatham, Ching-Tao Chang, Yam San Chee, Chyi-Ren Dow, Jason C. Hung, Qun Jin, Insung Jung, Hong Va Leong, Sheng-Tun Li, Fuhua Oscar Lin, Jonathan Liu, Nicoletta Sala, and Ying-Hong Wang, "A Survey of Distance Education Challenges and Technologies," International Journal of Distance Education Technologies (EI), Vol. 1, No. 1, Jan-Mar, 2003, pp. 1-20
 015. Yuya Fujiwara and Qun Jin (Japan), Ying-Hong Wang (Taiwan), "A Mobile Project Management System that Supports Collaborative Work by Sharing Individual Ideas and Group Schedule," The Journal of Three Dimensional Images, Vol. 17, No. 2003, March, pp. 80-86
 016. Ying-Hong Wang, "Image Indexing and Similarity Retrieval Based on Spatial Relationship Model," Information Sciences: An International Journal (SCI, EI), Vol. 154, No. 1-2, August, 2003, pp. 39-58
 017. Ying-Hong Wang, Ching-Ling Wang, Hui-Hua Huang, Wen-Hung Lo, "Applying Mobile Agents to E-business," Tamkang Journal of Science and Engineering: An International Journal(EI), Vol. 6, No. 3, September 2003, pp. 159-172
 018. Ying-Hong Wang and Chih-Hao Lin, "A Multimedia Database Supports English Distance Learning," Information Science: An International Journal (SCI, EI), Vol. 158, January, 2004, pp. 189-208
 019. Ying-Hong Wang, Chi-Ming Chung, Chyi-Jang Lee, and Chih-Chieh Chuang, "Ad hoc Routing Protocol based on Setup On-Demand Backup Node," International Journal of Computer Systems Science & Engineering (SCI, EI), Vol. 19, No. 2, March, 2004, pp. 75-84
 020. Ying-Hong Wang and Chih-Chieh Chuang, "Ad Hoc On-Demand Backup Node Setup Routing Protocol," Journal of Information Science and Engineering (SCI, EI), Vol. 20, No. 5, September 2004, pp. 821-843
 021. Ying-Hong Wang, Chyi-Jang Lee, and Chih-Chieh Chuang, "On-Demand Backup Node Setup Routing Protocol in Ad Hoc Wireless Networks," International Journal of Electrical Engineering (EI), Vol. 11, No. 2, May, 2004, pp. 141-152
 022. Ying-Hong Wang, Hung-Zu Lin, "Interference-aware QoS Multipath Routing for Ad Hoc Wireless Network," Journal of Internet Technology (EI), Vol. 5, No. 4, October, 2004, pp.323-330

023. Ying-Hong Wang, Wen-Nan Wang, and Chih-Hao Lin, "An Intelligent Semantic Agent for E-Learning Message Communication," *Journal of Information Science and Engineering (SCI, EI)*, Special Issue on E-Learning, Vol. 21, No. 5, September, 2005, pp. 1031-1051
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173. Ying-Hong Wang, Chih-Hsiao Tsai, Hao-Yi- Huang, Yi-Jia Tong, QoS-Based Fairness-Aware Downlink Scheduling in LTE-Advanced, Proceedings of 2013 Taiwan Academic Network Conference (TANET2013), held at Taichung, Taiwan, October 23-25, pp. 1-6
 174. Ying-Hong Wang, Chih-Hsiao Tsai, You-Hua Wu, “Robot-Based Deployment Mechanism for Wireless Sensor Networks in Unknown Region.” Proceedings of 2013 International Conference on Awareness Science and Technology (iCAST 2013), held at Aizuwakamsu, Japan, November 2-4, 2013, pp. 1-6
 175. Chih-Hsiao Tsai, Yu-Jie Lin, Han-Ming Chang, and Ying-Hong Wang, “Localization Mechanism with Mobile Reference Node in Grid-based Wireless Sensor Networks,” Proceedings of 2013 International Conference on Ubi-Media Computing (UMEDIA 2013), held at Aizuwakamsu, Japan, November 2-4, 2013, pp. 1-6

Books(專書著作)

1. 莊淇銘、王英宏合著，資訊概論(Chinese book), 華泰文化出版, October 2000
2. Chapter in Book, Chapter Title:”A Multimedia Database Supports Internet-Based English Learning”, Book Title:”Distributed Multimedia Databases: Techniques & Applications”, Edited by Professor Timothy K. Shih, Published by Idea Group Publishing, January 2002
3. 莊淇銘，王英宏，”資訊概論”，2002. 8 二版出版，ISBN: 957-609-388-0，華泰文化事業
4. Chapter in Book, Chapter Title:”A VR-Based Virtual Agent System”, Book Title:”Designing Distributed Learning Environments with Intelligent Software Agents”, Edited by Fuhua Oscar Lin, Published by Information Science Publishing, [ISBN: 1591405017](#), 2004 出版
5. 淡江大學資訊工程系資訊概論教學研究會，”資訊概論”，2005. 08 出版，ISBN: 957-483-324-0，東華書局
6. 淡江大學資訊工程系資訊概論教學研究會，”資訊概論”，2007. 08 出版，ISBN: 978-957-483-442-6，東華書局
7. 發行人&編輯者 王英宏、張志勇、石貴平，”Proceedings of The 3rd Workshop on Wireless, Ad Hoc, and Sensor Networks” (第三屆無線、隨意及感測網路研討會論文集)，2007. 09 出版，ISBN: 986-738-599-3，淡江大學資訊工程系

Invited Talks (應邀演講)

1. 2000. 4. 28. Department of Information Engineering, National Tsing Hua

- University (國立清華大學資訊工程系), Topic: "An Intelligent Mobile Agent Model for Distributed Multimedia Synchronization,"
2. 2001. 3. 15. Department of Information Engineering, National Chiao Tung University (國立交通大學資訊工程系), Topic: "An English Learning System based on Linked Grammar,"
 3. 2001. 11. 22 Department of Computer and Information Science, Soochow University (東吳大學資訊科學系), Topic: "A Spatial Representation Model and Similarity Retrieval of Icon Images"
 4. 2001. 12. 19 Department of Electrical Engineering, Yuan-Ze University (元智大學), Topic: "A Spatial Representation Model and Similarity Retrieval of Icon Images"
 5. 2002. 5. 24 Department of Information Engineering, ST.JOHN'S & ST.MARY'S INSTITUTE OF TECHNOLOGY (新埔技術學院資訊工程系), Topic: "Software Quality and Object-Oriented Programming"
 6. 2002. 11. 21. Department of Computer Science and Information Engineering, National Chiao Tung University(交通大學資訊工程系), Topic: "Spatial Relationship Model for Icon Image Representation and Similarity Retrieval"
 7. 2002. 12. 11. Department of Computer Science and Information Engineering, National Central University(國立中央大學資訊工程系), Topic: "Spatial Relationship Model for Icon Image Representation and Similarity Retrieval"
 8. 2003. 2. 5. Department of Computer Software, the University of Aizu, Japan, Topic:" Link Grammar Applying to Web Technology for e-Learning"
 9. 2003. 8. 20. Rotary Club of Pa-Te, Taoyuan, Taiwan (桃園八德扶輪社), Topic: "The Classifications, Integration, and Application of Enterprise on Wireless Communication"
 10. 2005. 12. 5 九十四年度教育部顧問室軟體工程聯盟「課程教材編撰及學程推廣」計畫說明會暨「網際服務軟體工程」課程講習會講師，講授主題“網路服務應用系統開發的「測試與專案管理」技術”，舉辦地點：台北科技大學
 11. 2006. 3. 15 Department of Electronic Engineering, Chung Yuan Christian University(中原大學), Topic:" A Hierarchical Multiple-Choice Routing Path Protocol for Wireless Sensor Networks"
 12. 2006.10.25 Department of Information Technology, Takming College(德明技術學院), Topic: "To be a Master of Information Engineering and its Future Development"
 13. 2006.11.25 Department of Computer and Information Science, Aletheia University(真理大學), Topic: "A Hierarchical Multiple-Choice Routing Path Protocol for Wireless Sensor Networks"
 14. 2007.09.26 Department of Information Technology, Takming College(德明技術學院), Topic:"The Purpose of Studying Graduate Program of Information Engineering"
 15. 2008. 06. 03. Department of Information Technology, National Pingtung Institute of Commerce(屏東商業技術學院), Topic:"Mobile Sink Routing Protocol with Registering in Cluster-based Wireless Sensor Networks"
 16. 2008. 10. 01. Department of Computer Science and Information Engineering, Fu Jen Catholic University(輔仁大學), Topic:" Row-prime Order Clustering Routing Protocol for Mobile Sink in Wireless Sensor Networks"

17. 2008. 10. 13. Department of Information and Computer Engineering, Chung Yuan Christian University(中原大學), Topic: "Row-prime Order Clustering Routing Protocol for Mobile Sink in Wireless Sensor Networks"
18. 2009. 05. 14. Institute of Network Learning Technology, National Central University(中央大學), "Ubiquitous and Adaptive Communication Systems for U-School Learning"
19. 2009. 11. 19. College of Information, Asia University(亞洲大學), Topic: "Row-prime Order Clustering Routing Protocol for Mobile Sink in Wireless Sensor Networks"
20. 2010. 03. 16. Panel Speaker (與談人 * 2) of 99 年國際會議競標經驗分享與交流研討會, 地點: 台大集思國際會議中心亞歷山大國際會議廳, Topic: 爭取國際會議實務技巧 and 總結討論, 主辦單位: 台灣經濟研究院(爭取國際會議在台舉辦計畫), 委辦單位: 經濟部國際貿易局, 協辦單位: 外交部 NGO 委員會、經濟部推動會議展覽專案辦公室
21. 2011. 03. 01, Department of Computer Science and Information Engineering, National Central University (中央大學), Topic: "**Constructing a SOA-based Framework for 3C Distribution Channel**"
22. 2011. 09. 21. National University of Kaphsiung (高雄大學), Topic: "**Grid-based hole recovery mechanism in hybrid wireless sensor networks**"
23. 2012. 04. 06 Department of Computer Science and Information Engineering, National Central University (中央大學), Topic: "**Constructing A Service Oriented Architecture For 3C Distribution Channel**"
24. 2013. 05.08. Taipei Municipal University of Education (臺北市立教育大學), Topic: "**Apply Sequence Frequency Reuse Scheme to Enhance Coordinated Multi-Point Transmission in LTE-A**"

Funded Research Grant Proposals and the Like (研究計畫案)

1. The Quantitative Analysis for Software Testing Criteria (#NSC 82-0408-E-032-001), funded by NSC, Taiwan, Aug. 1, 1992 to July 31, 1993.
2. Integrated Tools for Software Quality Control (#NSC 84-2213-E-032-013), funded by NSC, Taiwan, Aug. 1, 1994 to July 31, 1995.
3. The Implementation of Software Quality Control Tools in Control Integration Platform, NT 653,140, funded by III, Taiwan, Jan. 1, 1994 to Sept. 30, 1994
4. The Enhancement of Control Integration Platform and Planning of Object-Oriented Methodology, NT 784,883, funded by III, Taiwan, Sept. 1 1994 to Jun. 30 1995.
5. The File Structure Refinement and Version Control of Object-Oriented CASE Tools under OLE, COM, and CORBA, NT 712,800 funded by III, Taiwan, July 1, 1995 to Apr. 30 1996.
6. Concurrent Software Testing and Metrics based on Task Decomposition Mechanism (以工作元分解機制對並行軟體測試與衡量之研究) (#NSC 87-2213-E-032-009), funded by NSC, Taiwan, Aug. 1, 1997 to July 31, 1998.
7. Object-Oriented Software Testing and Metrics Based on a Class Hierarchy Decomposition Mechanism (以類別階層解析法測試及衡量物件導向軟體系統) (#NSC 87-2213-E-032-004), Co-Chair, funded by NSC, Taiwan, Aug. 1, 1997 to

- July 31, 1998.
8. The Design of Human-Machine Interface for Multimedia Lecture on Demand (多媒體隨選教學系統人機介面) (#NSC 88-2213-E-032-008), funded by NSC, Taiwan, Aug. 1, 1998 to July 31, 1999.
 9. Distributed Multimedia Object-oriented Application Framework, First Section, (分散式多媒體物件導向應用程式架構, 第一期) (#NSC 88-2213-E-032-023), Co-Chair, funded by NSC, Taiwan, Aug. 1, 1998 to July 31, 1999.
 10. Distributed Multimedia Object-oriented Application Framework, Second Section, (分散式多媒體物件導向應用程式架構, 第二期) (#NSC 89-2213-E-032-011), Co-Chair, funded by NSC, Taiwan, Aug. 1, 1999 to July 31, 2000.
 11. The project of Computer Courses Planning (資處科專業課程規劃) for 十信商工, funded by 十信商工, Taipei, Taiwan, Oct. 1999 to Dec. 1999.
 12. The Multimedia Handoff Algorithm based on Multi-tier Cellular System (架構在多階層蜂巢式系統下的多媒體交遞演算法之設計)(#NSC 89 2213-E-032-030), Co-Chair, funded by NSC, Taiwan, Aug. 1, 2000 to July 31, 2001
 13. A Mobile IPv6 based Seamless Handoff Strategy for Heterogeneous Wireless Networks (以 Mobile IPv6 為基礎的異質無線網路之無縫換手策略) (#NSC 92-2213-E-032-017), funded by NSC, Taiwan, Aug. 1, 2003 to July 31, 2004
 14. A Hierarchical Mobility Management Strategy for Integrated Heterogeneous Wireless Networks (整合型異質網路之階層式行動管理策略) (#NSC 93-2213-E-032-018), funded by NSC, Taiwan, Aug. 1, 2004 to July 31, 2005
 15. 教育部顧問室校院資訊人才培育先導型計畫—軟體工程課程推廣計畫『聯盟課程發展：網際服務軟體工程』，共同主持人，March 1, 2005 to January 31, 2006
 16. Semantic Enhanced QA System Architecture Use Link Grammar Parser for E-learning Environment 1/2 (在遠距學習環境下使用Link Grammar Parser 發展之語意問答系統 1/2) (#NSC 94-2520-S-032-003), funded by NSC, Taiwan, Aug. 1, 2005 to July 31, 2006
 17. 教育部顧問室嵌入式軟體課程推廣計畫『嵌入式系統軟體教學實驗室』計畫主持人，Aug. 1, 2005 to July 31, 2006
 18. Semantic Enhanced QA System Architecture Use Link Grammar Parser for E-learning Environment 2/2 (在遠距學習環境下使用Link Grammar Parser 發展之語意問答系統 2/2) (#NSC 94-2520-S-032-001), funded by NSC, Taiwan, Aug. 1, 2006 to July 31, 2007
 19. 教育部顧問室軟體工程課程推廣計畫『軟體工程學程推廣計畫』計畫主持人，Aug. 1, 2006 to Jan. 31, 2007
 20. 教育部顧問室嵌入式軟體課程推廣計畫『嵌入式系統軟體教學實驗室』計畫主持人，Aug. 1, 2006 to July 31, 2007
 21. 教育部顧問室軟體工程課程推廣計畫『軟體工程學程推廣計畫』計畫主持人，Feb. 1, 2007 to Jan. 31, 2008
 22. 教育部『工程及科技教育精進教學計畫』計畫主持人，October 1, 2007 to September 30, 2008
 23. 教育部前瞻晶片系統設計(SoC)學程計畫 97 年度計畫『嵌入式系統學分學程』計畫主持人，March 1, 2008 to February 28, 2009
 24. 國科會研究計畫案『以行動學習載具結合無線感測技術建構一個無所不在之學習環境』計畫主持人，Aug. 1, 2008 to July 31, 2009

25. 國科會研究計畫案『基於普適媒體技術建構遊戲式之行動學習環境』計畫主持人，Aug. 1, 2008 to July 31, 2009
26. 國科會研究計畫案『無線感測網路之網格叢集化行動路由協定』計畫主持人，Aug. 1, 2009 to July 31, 2010

Research Award (研究獎勵)

1. Second Level Research Award of NSC, Taiwan, 1992, Research Topic: The Quantitative Analysis For Different Software Testing Criteria.
2. Second Level Research Award of Tamkang University, 1992, Research Topic: The Quantitative Analysis For Different Software Testing Criteria.
3. Second Level Research Award of Tamkang University, 1993, Research Topic: A Quantitative Measurement of Testing Methodologies
4. Second Level Research Award of Tamkang University, 1995, Research Topic: The Measurement of Software Complexity through Program Decomposition
5. First Level Research Award of Tamkang University, 1996, Research Topic: A Quantitative Analysis for Different Testing Criteria through Program Decomposition
6. First Level Research Award of Tamkang University, 1998, Research Topic: Temporal Properties Underlying Multimedia Presentation with Z notations
7. First Level Research Award of Tamkang University, 1999, Research Topic: A Control and Data Abstraction Approach for Multimedia Presentation
8. First Level Research Award of Tamkang University, 2003, Research Topic: Floor Control Mechanism in Distributed Multimedia Presentation
9. First Level Research Award of Tamkang University, 2004, Research Topic: Image Indexing and Similarity Retrieval Based on Spatial Relation Model
10. First Level Research Award of Tamkang University, 2005, Research Topic: A Multimedia Database Supports English Distance Learning
11. First Level Research Award of Tamkang University, 2006, Research Topic: On Demand Backup Node Setup Routing Protocol in Ad Hoc Wireless Networks
12. First Level Research Award of Tamkang University, 2007, Research Topic: An Intelligent Semantic Agent for e-Learning Message Communication
13. Second Level Research Award of Tamkang University, 2007, Research Topic: Dynamic Backup Routes Routing Protocol for Mobile Ad Hoc Networks
14. First Level Research Award of Tamkang University, 2008, Research Topic: A Distributed Backup Routes Mechanism for Mobile Ad Hoc Networks
15. Second Level Research Award of Tamkang University, 2008, Research Topic: HMRP: Hierarchy-Based Multipath Routing Protocol for Wireless Sensor Networks
16. Second Level Research Award of Tamkang University, 2008, Research Topic: Applying Semantic Agents to Message Communication in e-Learning Environment
17. First Level Research Award of Tamkang University, 2008, Research Topic:

Social Services(教育服務、校內)

八十六學年度至八十八學年度擔任校務會議委員

八十七學年度擔任學生事務會議委員

八十五學年度至八十六學年度擔任工學院院務會議委員

八十六學年度擔任核心課程協調會資訊教育小組委員

八十七學年度至八十九學年度擔任工學院採購委員會委員

八十七學年度擔任核心課程資訊教育小組委員

八十八學年度擔任核心課程協調委員會資訊教育小組委員

八十九學年度擔任工學院教師評審委員會委員

八十九學年度擔任工學院資訊系教師評審委員會委員

八十九學年度擔任工學院第二曲線委員會委員

八十九學年度擔任核心課程協調會資訊教育小組委員

九十學年度擔任工學院資訊系教師評審委員會委員

九十學年度擔任工學院採購委員會委員

九十學年度擔任核心課程協調會資訊教育小組委員

九十學年度擔任校採購修繕委員會委員

九十學年度擔任系重點系所執行委員會委員

九十一學年度擔任工學院採購委員會委員

九十一學年度擔任核心課程協調會資訊教育小組委員

九十一學年度擔任校採購修繕委員會委員

九十一學年度擔任系重點系所執行委員會委員

九十一學年度擔任校通識教育委員會委員

九十二學年度擔任資訊工程系碩士班甄試入學招生委員

九十二學年度擔任資訊工程系推薦甄選入學招生委員

九十二學年度擔任工學院資訊系教師評審委員會委員

九十二學年度擔任校採購修繕委員會委員

九十二學年度擔任校核心課程協調會資訊教育小組委員

九十二學年度擔任校通識教育委員會委員
九十二學年度擔任校務會議委員
九十三學年度擔任資訊工程系 B 組博士班入學招生委員兼召集人
九十三學年度擔任校 ISO 14001 推動委員會委員
九十三學年度擔任校通識教育委員會委員
九十三學年度擔任校核心課程資訊教育小組召集人
九十三學年度擔任校學生獎助學金委員會委員
九十三學年度擔任工學院教師評審委員會委員
九十三學年度擔任工學院資訊系教師評審委員會委員兼召集人
九十三學年度擔任校資訊化委員會委員
九十三學年度擔任校募款委員會委員
九十三學年度擔任工學院資訊系主任導師
九十三學年度擔任資訊學會社團指導老師
九十三學年度擔任社團評鑑評審老師
九十三學年度擔任院務會議委員
九十三學年度擔任校務會議委員
九十四學年度擔任工學院資訊工程學系招生委員會委員兼召集人
九十四學年度擔任工學院招生委員會委員
九十四學年度擔任資訊工程系推薦甄選入學招生委員兼召集人
九十四學年度擔任資訊工程系申請入學招生委員兼召集人
九十四學年度擔任資訊工程系碩士在職專班招生委員兼召集人
九十四學年度擔任工學院教師評審委員會委員
九十四學年度擔任工學院資訊系教師評審委員會委員兼召集人
九十四學年度擔任資訊工程系 A 組博士班入學招生委員兼召集人
九十四學年度擔任校核心課程協調會資訊教育小組召集人
九十四學年度擔任校學生獎助學金委員會委員
九十四學年度擔任校通識教育委員會委員

九十四學年度擔任儀器暨實指導委員會委員

九十四學年度擔任校課程委員會委員

九十四學年度擔任服務教育課程指導委員會委員

九十四學年度擔任工學院資訊系主任導師

九十四學年度擔任校資訊化委員會委員

九十四學年度擔任校募款委員會委員

九十四學年度擔任資訊學會社團指導老師

九十四學年度擔任院務會議委員

九十四學年度擔任校務會議委員

九十四學年度擔任工學院資訊工程學系資訊網路與通訊碩士班籌備處主任

九十四、九十五學年度擔任校 ISO 14001 環境管理系統推動委員會委員

九十五學年度擔任工學院資訊工程學系招生委員會委員兼召集人

九十五學年度擔任工學院招生委員會委員

九十五學年度擔任工學院教師評審委員會委員

九十五學年度擔任工學院資訊系教師評審委員會委員兼召集人

九十五學年度擔任創業發展學院資訊軟體系教師聘審委員會委員

九十五學年度擔任資訊工程系 A 組博士班入學招生委員兼召集人

九十五學年度擔任校核心課程協調會資訊教育小組召集人

九十五學年度擔任校學生獎助學金委員會委員

九十五學年度擔任校通識教育委員會委員

九十五學年度擔任儀器暨實指導委員會委員

九十五學年度擔任校課程委員會委員

九十五學年度擔任服務教育課程指導委員會委員

九十五學年度擔任工學院資訊系主任導師

九十五學年度擔任校資訊化委員會委員

九十五學年度擔任校募款委員會委員

九十五學年度擔任資訊學會社團指導老師

九十五學年度擔任院務會議委員

九十五學年度擔任校務會議委員

九十五學年度擔任資訊工程學系博士班甄試入學招生委員兼召集人

九十五學年度擔任資訊工程學系碩士在職專班考試入學書面審查及口試委員兼召集人

九十五學年度擔任資訊工程系推薦甄選入學招生委員兼召集人

九十五學年度擔任資訊工程系申請入學招生委員兼召集人

九十五學年度擔任資訊工程系 A 組博士班入學招生委員兼召集人

九十六學年度擔任資訊工程學系博士班甄試入學招生委員兼召集人

九十六學年度擔任資訊工程學系碩士在職專班考試入學書面審查及口試委員兼召集人

九十六學年度擔任資訊工程系推薦甄選入學招生委員兼召集人

九十六學年度擔任資訊工程系申請入學招生委員兼召集人

九十六學年度擔任財務金融系在職專班入學考試資訊概論命題委員

九十六學年度資訊工程系進修學士班申請入學書面審查委員兼召集人

九十七學年度資訊工程系教師聘審委員會委員

九十七學年度工學院教師聘審委員會委員

九十七學年度國際學術委員會委員

九十八學年度資訊工程系教師聘審委員會委員

九十八學年度工學院教師聘審委員會委員

招生活動

九十三學年度接待滬江高中來訪，系介紹簡報

九十三學年度接待中正高中來訪，系介紹簡報

九十三學年度前往清水高中，校系介紹簡報

九十三學年度前往大理高中，系介紹簡報 (94.02.22)

九十三學年度前往復興高中，系介紹簡報 (94.04.18)

九十四學年度前往明倫高中，校系介紹簡報

九十四學年度接待振聲高中來訪， 系介紹簡報 (94.11. 04)

九十四學年度接待秀峰高中來訪， 院系介紹簡報 (94.11. 24)

九十四學年度前往華江高中， 院系介紹簡報 (94.11. 25)

九十六學年度前往大理高中， 學系介紹 (96.09.11)

Social Services(教育服務、校外)

八十八學年度中正理工學院電子工程研究所碩士學位口試委員

八十七年度擔任經濟部中央標準局兼任專利審查委員

八十八年度至九十年度擔任經濟部智慧財產局兼任專利審查委員

八十九年度台北縣“教育部補助教室電腦採購評選委員會”委員

八十九年度台北市政府勞工局特定對象職業訓練「MIS 程式設計班」評選會委員

八十九年度台北市政府勞工局特定對象職業訓練「網路工程師班」評選會委員

八十九年度勞委會職訓局泰山職業訓練中心“第二期網路工程招標委員會”委員

八十九年度交通部公路局“國道替代道路自動化交通資料集系統第一期工程設計及監造委託技術服務採購評選委員會”委員

八十九年度行政院勞委會職訓局『職務簡介第十八輯』文稿與劇本審查委員

八十九年度行政院勞委會職訓局『行職業展望第十三輯』文稿審查委員

八十九年度『高級中學資訊學科能力競賽決賽』命題暨評審委員會委員

八十九學年度清華大學資訊工程研究所碩士學位口試委員

八十九學年度中央大學資訊工程研究所碩士學位口試委員

九十年度交通部公路局“國道替代道路自動化交通資料集系統第一期工程設計及監造技術服務評審委員會”委員

九十年度『高級中學資訊學科能力競賽決賽』命題暨評審委員會委員

九十年度台北市政府『個人電腦及週邊設備聯合採購案公開評選作業評審委員

九十年度中華民國品質學會軟體品質委員會委員

九十學年度清華大學資訊工程研究所碩士學位口試委員

九十一年度經濟部智慧財產局兼任專利審查委員

九十一年學年度清華大學資訊工程研究所碩士學位口試委員

九十一年學年度中央大學資訊工程研究所碩士學位口試委員

九十二年度財團法人資訊工業策進會『學習產業輔導分項計畫』顧問

九十二年度經濟部智慧財產局兼任專利審查委員

九十二年學年度中央大學資訊工程研究所碩士學位口試委員

九十三年學年度中央大學資訊工程研究所碩士學位口試委員

九十三年度經濟部智慧財產局兼任專利審查委員

九十四年度經濟部智慧財產局兼任專利審查委員

九十四年度台北市消防局『智慧型消防勤務輔助派遣系統建置委託監督審驗專案服務』之採購評選委員會評選委員兼副召集人

九十四學年度德明技術學院資訊科學系課程規劃委員會諮詢委員

九十四學年度中央大學資訊工程研究所碩士學位口試委員

九十五年度經濟部智慧財產局兼任專利審查委員

九十五年度德明技術學院研究計畫外審委員

九十五學年度德明技術學院資訊科技系課程規劃委員會諮詢委員

九十五學年度中央大學資訊工程研究所碩士學位口試委員

九十五學年度德明財經科技大學資訊科技系新聘助理教授資格審查

九十六年度德明財經科技大學資訊科學系課程規劃委員會諮詢委員

九十六年度屏東商業技術學院學報外審委員

九十六學年度中央大學資訊工程研究所博士班口試委員

九十六學年度亞洲大學資訊科學系新聘助理教授資格審查

九十六學年度龍華科技大學資訊網路工程學系工程教育認證自評委員

九十六學年度台北市立成淵高中大學及四技甄選入學模擬面試委員

九十七學年度擔任『98年辦理師資培育之大學申請增設教師在職進修碩士學位班』電子機械及科技類班別審查委員

九十七學年度逢甲大學資訊工程系兼任教師資格審查，2009年3月

九十七學年度興國管理學院網路應用系新聘助理教授資格審查，2009年3月

九十八學年度亞洲大學資訊科學系新聘助理教授資格審查

中國電機工程師期刊論文審查委員

暨南大學學報論文外審委員

中華民國電腦輔助教學學會 出版委員

Research Interests (研究領域)

A Quantitative Analysis for Different Testing Criteria through Program Decomposition

A quantitative comparison among different testing criteria is presented. Testing criteria are methodologies that serve as the guidance for software testing. Various software testing criteria is surveyed. The quantitative difference among different criteria is a good guideline for selecting appropriate testing methodologies. Also, All-Statements and All-Branches testing criteria are two famous testing criteria that are widely applied in software testing. This paper infers a quantitative analysis to measure the difference between the All-Statements criterion and the All-Branches criterion. The quantitative analysis provides a theoretical basis for measuring testing efforts between different testing methodologies. A testing metric based on our analysis is then proposed to compare All-Statements and All-Branches criteria. An algorithm for this metric is also presented.

The Measurement of Software Complexity through Program Decomposition

A new methodology of measuring software complexity is proposed based on program decomposition mechanisms. The purpose of our research is to improve the quality and reliability of software by using a good measurement of the complexity of the software. Thus software development cost can be reduced due to the less errors introduced. We present a complete survey of various metrics in the literature. Six types of metrics or measurement techniques are discussed, including some earlier research results of the authors. We then propose a program decomposition mechanism based on the operational semantics of several language constructs in most procedural languages. An algorithm along with some examples is also given to show the feasibility of our mechanism. Our approach, relies on the path complexity of a program, is more accurate and easier to be realized. The algorithm also points out that how many individual complete paths of a program need to be tested.

An Integrated Platform Architecture For Multimedia Tools

The demonstration of multimedia presentation can be promoted by using multi-vendor's tools. The more tools are used, the more complicated communication is needed among these tools. The integration of these multimedia presentation tools is thus important. This paper describes an architecture named **Tool Integration Platform(TIP)** to integrate tools in a knowledge abstraction way. **TIP** is composed of a **CID(Control Integration Daemon)**, a **CII(Control Integration Interface)** and some **Integration Inference Rules(IIR)** that are applied by the **Integration Inference Engine(IIIE)**. The **IIR** are stored in a **Repository** and used to deduce tool knowledge dynamically. In this way, many tools can be integrated into a cooperative multimedia presentation developing environment. To verify this architecture, a number of multimedia tools are integrated into **TIP**. Finally, an integration assessing method is used to evaluate the integration status of tools in **TIP**.

Software Testing and Metrics of Concurrent Computation using Rendezvous Mechanism

Software testing and metrics are two important approaches to assure the reliability and quality of software. Testing and metrics of sequential programs have been fairly sophisticated processes, with various methodologies and tools available for use in building and demonstrating the correctness of a program. The emergence of concurrent

programming in the recent years, however, introduces new testing problems and difficulties that cannot be solved by testing techniques of traditional sequential programs. One of the difficult tasks is that concurrent programs can have many instances of execution for the same set of input data. Many concurrent program testing methodologies are proposed to solve controlled execution and determinism. However, there are few discussions of concurrent software testing from an inter-task perspective. Yet, the common characteristics of concurrent programming are explicit identification of the large grain parallel computation units (tasks), and the explicit inter-task communication via a rendezvous-style mechanism. In this paper, we focus testing on the concurrent programming through a task decomposition mechanism. We propose four testing criteria to test a concurrent program. Programmers can choose an appropriate testing strategy depending on the properties of the concurrent programs. Associated with the strategies, four equations are provided to measure the complexity of the concurrent programs.

Object-Oriented Software Quality through Data Scope Complexity Measurement

Software metrics is a necessary step for software reliability and quality and software metrics technique of traditional procedure-oriented programming is fairly maturity and has various methodologies and tools available for use. Recently, object-oriented programming became popular. However, traditional procedure-oriented software metrics are not appropriate for the development of an object-oriented software. Some researches of object-oriented software metrics have been proposed. But, these articles focus on only one metric that measures a specific characteristic of the object-oriented software. In this paper, we propose a new metric methodology, the **data scope complexity**, for object-oriented software based on data scope of a program. The data scope complexity can show complexities of multiple features of object-oriented programming at the same time. Also, we quantify and compare object-oriented programming with procedure-oriented programming.

Distributed Multimedia Application Framework

An application framework is used by deriving new concrete classes from existing classes and configuring a set of objects by providing parameters to each object and connecting them. Multimedia technologies are more popular and there are numerous multimedia applications are developed. However, there exist many same features in the various applications. If an application framework is built, the efforts must be decreased for a multimedia application is created and most multimedia applications will have more integrated user interface, data storing control, and retrieval. Gibbs had proposed a multimedia class framework for specifying interfaces. Blakowski had also proposed a object model for supporting multimedia information presentation. However, both of their frameworks are combined the object's structures to their input, output interfaces. It will restrict the flexibility of interface, control, and repository of media data. The Model-View-Controller (MVC) paradigm originated as a smalltalk user interface design strategy for representing information. MVC separates user interface applications into three components. The **model** contains application-specific data. The view displays that data on the screen. The **controller** handles user interactions that affect both models and views. The advantages of MVC are flexible, high reusability, and ease to maintain. Thus, this research is proposed a multimedia application framework based on MVC. The proposed framework is a class hierarchy. It has three main abstract classes; **media** class, **controller** class, and **presentation** class. The media class is the model component of MVC that specify the data types and contents of media. The controller and presentation classes have same functions as the controller and view components of MVC, respectively. A specialized class, synchronization class inherited from controller class, handles the synchronization and networking functions.

Multimedia Database System

Multimedia will bring dramatic improvements to the human-computer interaction. Multimedia provides the richest and most expressive way of representing, browsing, and interacting with information. Multimedia information is space intensive. It is complex. In ever more inter-networked architectures, multimedia elements need to be searched, concurrently accessed, updated, and otherwise manipulated consistently. In short, multimedia needs to be database-enabled. Database management systems (DBMSs) allow large amounts of information to be consistently and concurrently shared by many users on local and wide area networks. Database management systems provide several important capabilities when concurrently sharing information, including querying, transaction support, recovery, security, storage structures for high-performance access, versioning, and data integrity constraints. These features are very important for managing large volumes of multimedia information efficiently on inter-networked environments. The database capabilities for multimedia, the technologies that need to be integrated to support multimedia database applications, the requirements of multimedia information from database, these are the central themes of this research.

A Spatial Representation Model and Similarity Retrieval of Icon Images

Spatial representation by 2-D Strings and its variants have gained increasing attention in a pictorial spatial database. Most of them represent the spatial information by cutting the icons in an image and being associated with a lot of spatial operators. Their similarity retrievals require massive geometric computations and focus only on those database images that own all of the icons and spatial relationships of the query image. In this paper, a new spatial knowledge representation model named "Two Dimension Begin-End boundary string" (2D Be-string) is proposed. The 2D Be-string represents an icon by its MBR boundaries. By applying a number of "dummy objects", the 2D Be-string can intuitively and naturally represent the pictorial spatial information without any spatial operator. In addition, an image similarity evaluation method based on the modified "Longest Common Subsequence" (LCS) algorithm is presented. By the proposed evaluation method, not only those images which all of the icons and their spatial relationships fully accord with the query image can be sifted out, but also for those images which partial of icons and/or spatial relationships are similar with the query image. It resolves the problems that the query targets and/or spatial relationships are not certain. Our representation model and similarity evaluation also simply the retrieval progress of linear transformations, include rotation and reflection, of an image.

Mobile Agents over e-Business

Due to the popularization of Internet and World Wide Web (WWW), the limitation of distance and region are broken for business behaviors. E-Commerce can help a company or enterprise to extend its market place to unlimited region. Agent technique is one of the important technologies developed to support the Internet applications. Especially, the Internet and WWW technologies broken the limitation of space of enterprise marketing, and the agent techniques solve the problems of temporality. Because of when the users are off-line, the agents are still active in the world of computer network and play the role of their users. In this paper, a mechanism is proposed for electronic marketplace based on agents and mobile agents. There are some issues will be researched. They include the platform of mobile agents, the types and classifications of agents and mobile agents, behaviors of commerce transactions and processing models, negotiation mechanisms, authentication and security, ... etc. Moreover, they include the techniques of information retrieval, data mining,

and knowledge base, ... etc. Based on this architecture of E-marketplace, the applications of E-commerce will be more effective, easier to develop, and more creating the marketing of business.

Wireless Multimedia

Nowadays, wireless communication that provides voice only is not sufficient to support the user's need. Therefore, it's an important feature of next generation wireless communication to offer this capability through mobile Internet. Mobile IP allows mobile hosts to change their location and reduce data packet loss probability in wireless communication networks. However, mobile IP still have some defects in handoff and route aspects. Thus, cellular IP protocol is proposed for routing of IP datagrams to mobile stations and fast handoff control in a limited geographical area. It can cooperate with mobile IP to provide wide area mobility support. In this paper, we offer a Soft-handoff method to improve Quality of Service and resource switching management to reduce data packet loss for mobile multimedia communication in cellular IP and mobile IP network.

A Distributed Backup Routes Mechanism for Mobile Ad Hoc Networks

A mobile ad hoc network (MANET) is a self-organizing and adaptive wireless network constructed by the dynamic gathering of mobile nodes (MNs). The communication among MNs in MANETs is carried out without base stations or access points and the transmission of data packets is completed through relays among nodes. Due to the mobility of MNs, the topology of a MANET frequently changes and thus results in the disability of on-the-fly data transmission routes. To cope with the intrinsic properties of MANETs, Dynamic Backup Routes Routing Protocol (DBR²P), a distributed backup routes mechanism for quick reconnection during link failures, is proposed in this paper. DBR²P is an on-demand routing protocol which can set up many backup routes to reach a destination node in a given period of time. The information of backup routes can be saved in a specific on-the-route node and enables backup routes to be found immediately in situation regarding disconnection. When a link fails, routes from the source node to the destination node are analyzed to obtain backup routes and to sustain quick reconnection. As a result, DBR²P could more thoroughly improve the quality of routing than previous routing protocols.

A Transparent Cache-based Mechanism for Mobile Ad Hoc Networks

Mobile ad hoc networks (MANETs) enable all mobile nodes to communicate each other without base stations or access points, and the transfer of data packets is completed through the relay among all mobile nodes. However, a MANET is a self-organizing and adaptive wireless network formed by the dynamic gathering of mobile nodes, and the topology of a MANET frequently changes. To cope with the intrinsic properties of MANETs, a transparent cache-based mechanism is proposed in this paper. With the aid of the mechanism, the repetition of data and data path occurring in a MANET could be cached in some special mobile nodes. Routes and time span to access data are therefore shortened, and the data reusable rate is enhanced to reduce the use of bandwidth and the power consumption of battery.

A Multimedia Database Supports English Distance Learning

This work presents a novel English distance learning system that was developed through multimedia database and Internet technologies called English multimedia corpus. The system includes English articles, dialogs, and videos. A student can study English writing and

reading as well as view Web browser listings to connect the Corpus server. In the system, semantic query and "Link grammar" are applied to construct the English multimedia corpus system. Furthermore, it promotes the query level from keyword-base and content-based query to a semantic level. The main function of this system is to query the English sentence pattern through keywords from the English multimedia corpus. The other function is to detect grammatical errors in written English. Thus, the system not only teaches English grammar, but also, due to its database, allows teachers to understand the most frequent mistakes.

An Intelligent Semantic Agent for Supervising Chat Rooms in e-Learning System

This paper presents an English chat room system in which students can discuss course by interacting with teachers and students. First, the novel mechanism provides Learning_Angel Agent and Semantic Agent that acts as supervisors constantly online to handle queries. Next, the mechanism also provides a QA subsystem that acts as assistant. The Learning_Angel can detect syntax errors written by the online users. The Semantic Agent can check the semantic of each sentence. Sometimes learners may make semantic level mistakes. This implies that they don't understand the course topic. The semantic agent can thus give some correction suggestions to users and analyze the data in the learner corpus. Moreover, when users query the system, the system will attempt to find the answer from the knowledge ontology or learner corpus. Besides, if sufficient number of QA pairs has been accumulated, the FAQ can act as a powerful learning tool for the learners.

Interfering-aware QoS Multipath Routing for Ad Hoc Wireless Network

Mobile nodes are interconnected by multipath routing paths consist of unstable radio links in ad hoc wireless network. It is difficult to provide QoS routing in such network because of imprecise network information, insufficient bandwidth and dynamic topology. For improving network stability and throughput, multipath routing protocols are proposed. Sender node will discover multiple disjointed routing paths and spread traffic into them. Unstable throughput will invite unexpected delay or jitter. Some multipath routing protocols evaluate available bandwidth of paths and select enough bandwidth from them. For minimizing the cost of these paths, paths with smaller hopcounts will be prior selected. These paths are general too closed and the total throughput cannot just be sum up because of "paths interfering". Discovering and selecting multiple high-interfering paths are ineffectual and the available bandwidth is not precise. In this paper, we proposed an interfering-aware QoS multipath routing protocol for ad hoc wireless multimedia network. We apply a scheme to evaluate available bandwidth according to the network capacities with different Media Access Control (MAC) protocols. A concept of "Interfering ratio" of multipath will be discussed and we evaluate the stability and throughput improvement by simulations.

A Hierarchical Multiple-Choice Routing Path Protocol for Wireless Sensor Networks

The wireless sensor networks (WSNs), a network comprising the huge number of sensor nodes, allow users to monitor a remote environment accurately by combining the data intelligently from the individual nodes. These networks require robust wireless communication protocols that are energy efficient and provide low latency. In this paper, we present a *Hierarchical Multiple-Choice Routing Path Protocol (HMRP)*, a routing protocol for collecting data over multi-path, energy-balancing, and data aggregation to achieve good performance in terms of system lifetime and data delivery ratio. The design of the protocol aims to satisfy the requirements of sensor networks that every sensor transmits sensed data to the sink spontaneously. The sink constructs hierarchical tree by broadcasting its hop value to find the child nodes.

Other nodes discover the child nodes in turn by the same way. The HMRP uses Candidates Information Table to avoid flood-ing and periodic updating of routing information. Moreover, the tree will automatically reconfigure according to nodes failure or adding the new nodes. The simulation results show that HMRP can increase the system lifetime by comparing with other gen-eral-purpose multi-hop clustering or tree-based approaches.