

Curriculum Vitae

Yao-Nan Lien

Dean, College of Information and Electrical Engineering
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Education

Ph.D. 1/1982 - 8/1986 EE Purdue University
M.S. 8/1980 - 12/1981 EE Purdue University
B.S. 9/1975 - 7/1979 EE National Cheng Kung University

Professional Experience

College of Information and Electrical Engineering Asia University	Dean	8/2016 - Present
Department of Photonics and Communication Engineering Asia University	Distinguished Professor	2/2016 - Present
College of Science National Chengchi University	Dean	8/2000 - 7/2004
Dept. of Computer Science National Chengchi University	Chairman	8/1996 - 7/1999
Dept. of Computer Science National Chengchi University	Professor	8/1996 - 2/2016
Dept. of Computer Science National Chengchi University	Associate Professor	8/1995 - 7/1996
Computer and Communications Laboratories, Industrial Technology Research Institute	Deputy Director	12/1993 - 8/1995
Bell Laboratories AT&T	Member of Technical Staff	10/1989 - 12/1993
Department of CIS The Ohio State University	Assistant Professor	1/1986 - 9/1989

Research Interests

Mobile Computing and Communications, Database, Emergency Communication, 3D Digital Archiving.

Research Activity and Accomplishment

1. Database

Doing research in distributed database on local multiaccess networks, including file allocation, concurrency control, and query processing. Published numerous papers on journals and conferences such as IEEE ICDE and ICDCS. Serving program committee for some IEEE conferences as members, tutorial chair, vice chair, etc.

2. Switching and Intelligent Networks

Designed and implemented various system software for 5ESS Switch and Intelligent Networks in AT&T Bell Laboratories. Proposed and Designed a new Application Oriented Language as well as a system framework to facilitate fast communication software development.

3. Mobile Computing and Mobile Communications

Doing research in mobile agent, 3G mobile communication networks, mobile LAN, QoS for All-IP networks. Published numerous papers on journals and conferences.

4. Software Development Management

Managing various software system development in the area of PDA, OCR, Form Reader, and Embedded Operating Systems.

5. Telecommunication Regulation Policy

Doing research in the telecommunication regulation policy. Serving as a member of Telecommunication Advisory Board for the R.O.C government since 1998. Providing consultation to the Ministry of Transportation and Communications in making national telecommunication laws and regulations.

6. QoS for All-IP Networks

Designed Budget-Based QoS Management Infrastructure (BBQ) as well as some QoS management tools for All-IP Networks.

7. Contingency Communication Networks

Designed two contingency communication networks for large scale natural disasters.

8. 3D Digital Archiving

Designed the "Drunk-eye" naked-eye 3D viewing technique as well as a set of post processing software to produce 3D photograph using regular digital cameras.

Recent Publications (Journals)

1. Pei-Chun Che, Han-Yi Lin, Hung-Chin Jang, Yao-Nan Lien and Tzu-Chieh Tsai, "A Study of English Mobile Learning Applications at National Chengchi University", *International Journal of Distance Education Technologies*, vol. 7, no. 4, Oct.-Dec. 2009, pp. 38-60.
2. T. L. Huang, T. Y. Hwang, C. H. Chang, C. C. Huang, Y. N. Lien and C. M. Chung, "Optimal System Harmonic Filters Design", *Journal of Information and Optimization Sciences*, vol. 31, no. 6, Nov 2010, pp. 1307-1319
3. T. L. Huang, T. Y. Hwang, C. H. Chang, C. C. Huang, Y. N. Lien and C. M. Chung, "Optimal Pair-Layer Stabilizer Design", *Journal of Information and Optimization Sciences*, vol. 31, no. 6, Nov 2010, pp. 1289-1306
4. T. L. Huang, C. M. Tsai, T. Y. Hwang, C. C. Huang, Y. N. Lien and C. M. Chung, "Optimal Capacitors Appointment through Immune Multi-Objective Algorithm", *Journal of Information and Optimization Sciences*, vol. 31, no. 5, Sep 2010, pp. 973-992.
5. T. L. Huang, T. Y. Hwang, C. C. Huang, Y. N. Lien and C. M. Chung, "Multi-Objective Optimization via Fuzzy-Evolution Method", *Journal of Information and Optimization Sciences*, vol. 31, no. 5, Nov 2010, pp. 1263-1274.
6. J.S.Sheu, C.T.Wang, C.C.Huang, Y.N.Lien, T.L.Huang, T.Y.Hwang, C.H.Chang, S.H.Lin, and C.C.Wong, "New Fuzzy CMAC Learning Method", *International Journal of Information and Technology*, vol. 5, no. 1, July, 2010, pp. 8-14.
7. Hsiao-Tzu You, Yao-Nan Lien and Jyh-Shyan Huang, "A Flow-Aware Placement of Mobile Agent Control Network over Opportunistic Networks", *Advances in Intelligent Systems and Applications - Volume 1, Smart Innovation, Systems and Technologies Volume 20*, , 2013, pp. 611-623.
8. Yao-Nan Lien, "Mobilizing Digital Museums with 3D Photography", *International Journal of Computing and Digital Systems*, vol. 5, no. 1, Jan, 2016, pp. 97-104.

Recent Publications (Conferences)

1. Yao-Nan Lien and Hong-Qi Xu, "A UDP Based Protocol for Distributed P2P File Sharing", *Proceedings of 8th IEEE International Symposium on Autonomous Decentralized Systems (ISADS)*, March 21-23, 2007, Sedona, Arizona, pp. 318-324.
2. Yao-Nan Lien and Ho-Cheng Hsiao, "A New TCP Congestion Control Mechanism over Wireless Ad Hoc Networks by Router-Assisted Approach", *Proceedings of IEEE Workshop on Specialized Ad Hoc Networks and Systems (SAHNS 2007)*, June 29, 2007, Toronto, Canada.
3. Yao-Nan Lien and Kuo-Chan Huang, "Improving Resource Utilization By Over Admission", *Proceedings of IEEE TENCON 2007*, Oct. 30-Nov.2, 2007, Taipei, Taiwan.
4. Yao-Nan Lien and Yi-Fan Yu, "Hop-by-Hop TCP over MANET", *Prof. of The First IEEE International Workshop on Wireless Network Algorithms (WiNA 2008)*, Dec. 9-12, 2008, YiLan, Taiwan.
5. Yao-Nan Lien and Ming-Han Wu, "Partial-Reliable TCP", *Proc. of 2008 International Computer Symposium*, Nov. 13-15, 2008, DanShuei, Taiwan, pp. 568-573.
6. Yao-Nan Lien and Yung-Chuan Wun, "Timeliness and QoS Aware Packet Scheduling for Next Generation Networks", *Proc. of the 12th International Conference on Network-Based Information Systems (NBIS 2009)*, Aug. 19-21, 2009, Indianapolis, U.S.A., pp. 9-16.
7. Yao-Nan Lien and Yu-Chi Ding, "Hop-by-Hop TCP for Sensor Networks", *Proceedings of The First International Workshop on Wireless & Mobile Networks*, March 23-25, 2009, Athens, Greece.
8. Yao-Nan Lien, Hung-Chin Jang and Tzu-Chieh Tsai, "A MANET Based Emergency Communication and Information System for Catastrophic Natural Disasters", *Proceedings of IEEE Second International Workshop on Specialized Ad Hoc Networks and Systems (SAHNS 2009)*, June 22-26, 2009, Montreal, Canada, pp. 412-417.
9. Hung-Chin Jang, Yao-Nan Lien and Tzu-Chieh Tsai, "Rescue Information System for Earthquake Disasters Based on MANET Emergency Communication Platform", *Proc. of the ACM International Workshop on Advanced Topics in Mobile Computing for Emergency Management: Communication and Computing Platforms (MCEM 2009)*, June, 2009, Leipzig, Germany, pp. 623-627.
10. Yao-Nan Lien, Hung-Chin Jang and Tzu-Chieh Tsai, "Design of P2Pnet: An Autonomous P2P Ad-Hoc Group Communication System", *Proceedings of The First International Workshop on Mobile Peer-to-Peer Information Services (MP2PIS)*, May 18-21, 2009, Taipei, Taiwan.
11. Yao-Nan Lien, Li-Cheng Chi and Yuh-Sheng Shaw, "A Walkie-Talkie-Like Emergency Communication System for Catastrophic Natural Disasters", *Proceedings of 10th International Symposium on Pervasive Systems, Algorithms and Networks (ISPAN09)*, Dec. 14-16, 2009, Kaohsiung, Taiwan.
12. Yao-Nan Lien, Li-Cheng Chi and Chih-Chieh Huang, "A Multi-hop Walkie-Talkie-Like Emergency Communication System for Catastrophic Natural Disasters", *Proceedings of International Conference on Parallel Processing Workshop (on Applications of Wireless Ad Hoc and Sensor Networks)*, Sep. 13-16, 2010, San Diego, CA.
13. Yao-Nan Lien and Yu-Chi Ding, "Can DCCP Replace UDP in Changing Network Conditions?", *Proceedings of IEEE 25th International Conference on Advanced Information Networking and Applications*, March 22-25, 2011, Singapore.
14. Hung-Chin Jang, Yao-Nan Lien and Shi-Kung Chou, "Verification Process for Digital IC Design", *Proceedings of 2011 Conference on Taiwan Software Engineering (TCSE)*, Jul 8-9, 2011, Taipei, Taiwan.
15. Yao-Nan Lien and Li-Cheng Chi, "A Generator for Finite State Machine Simulators - FSMGEN", *Proceedings of 22th Conference on Object-Oriented Technology and Applications (OOTA)*, Jul 8-9, 2011, Taipei, Taiwan.
16. Daniel Yuh Chao, Yao-Nan Lien and Fang Yu, "A Control Policy of S3PR Without Siphon Enumeration and Reachability Analysis", *11th International Conference on Automation Technology*, Nov. 18-20, 2011, DouLiou, Taiwan.
17. Yao-Nan Lien and Yi-Shiuan Lin, "Placement of Control Network for Mobile Agents over Opportunistic Networks", *Proceedings of Eighth International Workshop on Mobile Peer-to-Peer Computing*, Mar. 2012, Lugano, Switzerland.
18. Jyh-Shyan Huang, Yao-Nan Lien and Chih-Lin Hu, "Design of Contingency Cellular Network", *Proceedings of 14th Asia-Pacific Network Operations and Management Symposium*, Sep. 25-27, 2012, Seoul, Korea.
19. Jyh-Shyan Huang, Yan-Song Wang and Yao-Nan Lien, "Deployment Scheduling of Contingency Cellular Network for Disaster Relief Operations", *Proceedings of the 15th Asia-Pacific Network Operations and Management Symposium*, Sep 25-27. 2013, Hiroshima, Japan.
20. Jyh-Shyan Huang and Yao-Nan Lien, "Challenges of Emergency Communication Network for Disaster Response", *Proceedings of IEEE International Conference on Communication Systems*, Nov. 21-23, 2012, Singapore.
21. Jyh-Shyan Huang, Yao-Nan Lien and Yu-Chieh Huang, "Network Topology Planning for Contingency Cellular Network", *Proceedings of 17th Mobile Computing Workshop*, Aug. 2012, Taoyuan, Taiwan.
22. Daniel Y. Chao, Yao-Nan Lien, Jiun-Ting Chen and Yu-Ying Shih, "Improvement of set-covering Weighted Control Model of S3PR", *2nd International Conference on Materials and Products Manufacturing Technology*, Sep. 2012, GuangZhou, China
23. Hsiao-Tzu You, Yao-Nan Lien and Jyh-Shyan Huang, "A Flow-Aware Placement of Mobile Agent Control Network over Opportunistic Networks", *Proceeding of 2012 International Computer Symposium*, December 12-14, Hualien, Taiwan.
24. Jyh-Shyan Huang, Yun-Ting Wu and Yao-Nan Lien, "Bandwidth Allocation for Contingency Cellular Network", *Proceeding of Global Wireless Summit 2013*, June. 24-27, 2013, Atlantic City, New Jersey, U.S.A.
25. Pei-Jeng Kuo, Yao-Nan Lien, Wei-Hsiang Su, Yi-Ting Wang, Yi-Ning Huang and Wei-Chen Chu, "Mobilizing 3D Virtual Artifacts Exhibition System of National Palace Museum", *Archiving 2013*, April. 2-5, 2013, Washington D.C. U.S.A.
26. Hung-Chin Jang, Yao-Nan Lien, Kuan-Lun Pan, Wei-Cheng Chen and Ching-Chieh Huang, "Mobilizing Digital Museum Explorer", *2014 International Conference on e-Commerce, e-Administration, e-Society, e-Education, and e-Technology (E-CASE&E-Tech 2014)*, Apr 2-4, 2014, Nagoya University, JAPAN.
27. Hung-Chin Jang and Yao-Nan Lien, "Educational Exhibition System and the Application of APP on Museum Mobile Learning – National Palace Museum as an Example", *2014 International Conference on e-Commerce, e-Administration, e-Society, e-Education, and e-Technology (E-CASE&E-Tech 2014)*, Apr 2-4, 2014, Nagoya University, Japan.
28. Yao-Nan Lien, Kuan-Chieh Huang and Jyh-Shyan Huang, "Cross Network Topology Design for Contingency Cellular Network", *IEEE Canada International Humanitarian Technology Conference (IHTC 2014)*, June 1-4, 2014, Montreal, Canada.
29. Jyh-Shyan Huang, Tsai-Yi Kao and Yao-Nan Lien, "Resource Delivery Path Dependent Deployment Scheduling for Contingency Cellular Network", *4th International Workshop on Pervasive Networks for Emergency Management (PerNEM 2014)*, March 24, 2014, Budapest, Hungary.
30. Pei-Jeng Kuo and Yao-Nan Lien, "'Toy Kit' of the Emperor Exhibiting National Palace Museum's Artifacts of Emperor Chien-lung on Tablets", *Archiving 2014*, May 13-15, 2014, Berlin, Germany.
31. Yao-Nan Lien, Hung-Chin Jang, Tzu-Chieh Tsai, Peggy Kuo and Chih-Lin Hu, "Mobilizing Digital Museums with Chinese Digital Archive", *The 8th International Conference on Ubi-Media Computing*, August 24-26, 2015, Sri Lanka.
32. Yao-Nan Lien, "Mobile Edutainment System – National Palace Museum as An Example", *The 2nd International Workshop on Mobile Applications (MobiApps 2015)*, August 24-26, 2015, Rome, Italy.

33. Jyh-Shyan Huang, Yao-Nan Lien and Chun-Fu Wang, "Design of Multi-Path Network Topology for Contingency Cellular Network", *Int'l Conf. on Information and Communication Technologies for Disaster Management (ICT-DM'2015)*, Nov 30, 2015, Rennes, Brittany, France.
34. Yao-Nan Lien, Hui-Ching Chang and Jyh-Shyan Huang, "Design of Agency Communication for Contingency Cellular Network", *Int'l Conf. on Information and Communication Technologies for Disaster Management (ICT-DM'2016)*, Dec 13-15, 2016, Vienna, Austria.

• Patents

1. Yao-Nan Lien, Ing-Shyh Shyu, Lo-Ting Tu, Mou-Yen Chen and Wen-Wen Lin, "Screen Display Methods for Computer Aided Data Entry", *R.O.C. Patent*, no. 087319, June 1, 1997 to May 21, 2016.
2. Yao-Nan Lien, Ing-Shyh Shyu, Lo-Ting Tu, Mou-Yen Chen, Wen-Wen Lin and Yea-Shuan Huang, "Screen Display Methods for Computer Aided Data Entry", *U.S. Patent*, no. 5,923,792, July 13, 1999.
3. Yao-Nan Lien, Ing-Shyh Shyu, Lo-Ting Tu, Mou-Yen Chen, Wen-Wen Lin and Yea-Shuan Huang, 2003, *PRC Patent*, no. ZL97100414.5, March 12, 2003.
4. Yao-Nan Lien, "RF Signal Based Triangulation by Phantom Positioning", ROC Patent, no. I306952, March 1, 2009 to Dec. 25, 2026.

• Books and Book Chapters

1. Yao-Nan Lien, "Ubiquitous Information Service Technology", Weikeg Book Co., April 1996, Taiwan
2. Yao-Nan Lien, "Operating Systems", *Electrical Engineering Handbook*, Academic Press, John Wiley, ISBN-10: 0121709604, Oct. 2004, U.S.A., pp. 355-366.
3. Yao-Nan Lien, *Introduction to Communication Networks for Practitioner*, *Wu-Nan Co., Taipei, Taiwan*, Nov. 1, 2013, ISBN 978-957-11-7329-0.
4. Yao-Nan Lien, Hung-Chin Jang, Tzu-Chieh Tsai, Pei-Jeng Kuo and Chih-Lin Hu, "Mobilizing Digital Museums (Chapter in *Managing Innovation and Cultural Management in the Digital Era: Case of National Palace Museum*)", *Routledge Co. Singapore*, Accepted.

Professional Society Membership and Services

• Membership

IEEE

ACM

Computer Society of Republic of China

Institute of Information and Computing Machinery

• Serve as Program Committee member, tutorial chairperson, vice program chair in the following professional conferences

IEEE Int'l Conf. on Data Engineering

IEEE Int'l Conf. on Distributed Computing Systems

Object-Oriented Technologies and Applications

Mobile Computing Workshop

International Computer Symposium

• Review numerous papers for various IEEE and ACM journals

• Journal Editors

International Journal on Cloud Computing: Services and Architecture (IJCCSA)

Professional Conference Services

2010	The Sixth International Workshop on Mobile Peer-to-Peer Computing	Program Committee Member
2011	13th IEEE International Workshop on Future Trends of Distributed Computing Systems (FTDCS 2011)	Program Committee Member
2011	3rd International Conference on Computer Science and its Applications (CSA-11)	Program Committee Member
2011	The Fourth International Conference on Advances in Mesh Networks (MESH 2011)	Program Committee Member
2011-2014	International Workshop on Performance Evaluation of Wireless Networks (PEWiN-2011)	Program Committee Member
2011	National Computer Symposium(NCS)	Program Committee Member
2012	2012 FTRA International Conference on Computer Science and its Applications	Program Committee Member
2012-2014	2012 台灣軟體工程研討會	Program Committee Member
2013-2015	International Workshop on Performance Evaluation of Wireless Networks	Program Committee Member
2013	The 5th FTRA International Conference on Computer Science and its Applications (CSA-13)	Program Committee Member
2013	FTRA 2013 International Symposium on Ubiquitous Computing and Embedded Systems (UCES-13)	Program Committee Member
2014-15	The International Conference on ICT for Disaster Management	Program Committee Member
2014	The 2014 International Symposium on Information and Communication Technology (ICT 2014)	Program Committee Member
2014	International Conference on Frontiers of Internet of Things (FIT)	Program Committee Member
1997-2016	Workshop on Mobile Computing	Program Committee Member
2010-2016	International Workshop on Applications of Wireless Ad Hoc and Sensor Networks (AWASN'10)	Program Committee Member
2014-15	FTRA International Conference on Computer Science and its Applications	Program Committee Member
2014	International Online Conference on Advanced Information Technology for Human Science (AITHS 2014)	Editor
2015	ISADS 2015 Workshop on Agile Decentralized Resilient Operation of Internet of Things Systems (ADROIT)	Program Committee Member
2015	2015 Workshop on Pervasive emergency management (PerNEM)	Program Committee Member
2014	The First International Workshop on Advanced Data Delivery and Security Techniques in Wireless and Mobile Networks ADST-WMN 2014	Program Committee Member
2014	2nd International Workshop on Internet of Things Technologies (IoTT 2014)	Program Committee Member
2015	The 12th International Symposium on Autonomous Decentralized System (ISADS 2015)	Program Committee Member
2015	Fifth International Conference on Computer Science, Engineering and Applications (CCSEA-2015)	Program Committee Member
2015	Fifth PerNEM Workshop	Program Committee Member
2015	The 8th IEEE International Conference on Ubi-media Computing (U-Media 2015)	Program Committee Member

2015	Seventh International Conference on Wireless & Mobile Networks (WiMoNe 2015)	Program Committee Member
2016	4th International Conference on Robotics, Informatics and Intelligence control Technology (RIIT2016)	International Committee Member
2016	The 3rd International Workshop on Internet of Things Technologies	Program Committee Member
2017	2017 Workshop on Agile Decentralized Resilient Operation of Internet of Things Systems (ADROIT2017)	Program Committee Member
2017	International Conference on Platform Technology and Service (PlatCon-17). Feb 13-15, 2017, Busan, Korea.	Program Committee Member
2017	8th International Conference on Computer Science and its Applications (CSA-16)	Program Committee Member
2017	The 2017 International Conference on Advanced Technologies Enhancing Education (ICAT2E 2017) Qingdao, China, from March 18 to March 20, 2017	Program Committee Member
2017	Second International Conference on Networks, Communications, Wireless and Mobile Computing (NCWMC- 2017), Switzerland.	Program Committee Member
2017	The 3rd World Conference on Media and Mass Communication (MEDCOM 2017), April 20th -22nd in Kuala Lumpur	Scientific Committee Member