SUN-YUAN HSIEH

Chairperson and Distinguished Professor, Department of Computer Science
& Information Engineering

National Cheng Kung University

http://algorithm.csie.ncku.edu.tw/syhsieh.htm

95502 Building of Instrument   Email: hsiehsy@mail.ncku.edu.tw

No1. University Road, Tainan 701, Taiwan, R.O.C.   Phone: +886-6-2757575 ext. 34201

Research Interests

Fault-tolerant computing / parallel and distributed computing/ design and analysis of algorithms/ graph theory/ bioinformatics

Education

National Taiwan University, Taipei, Taiwan 1994-1998

Ph.D in Computer Science and Information Engineering (CSIE)

Dissertation: Efficient Parallel Algorithms on Distance-Hereditary Graphs

Advisor: Gen-Huey Chen

National Central University, Taoyuan, Taiwan 1992-1994

M.S. in Computer Science and Information Engineering (CSIE)

Thesis: An Efficient Parallel Algorithm for Recognizing Series-Parallel Graphs

Advisor: Chin-Wen Ho

Tamkang University, New Taipei City, Taiwan 1988-1992

B.S. in Computer Science and Information Engineering (CSIE)

Work Experience

Department of Computer Science and Information Engineering, National Cheng Kung University, Taiwan

Chairperson (2015/8/1~)

Institute of Engineering Education Taiwan, Taipei 10453, Taiwan

Program Evaluator (2015/8/31~)

Institute of Manufacturing Information and Systems, National Cheng Kung University, Taiwan

Director (2010/8/1~2015/7/31)

International Olympiad in Informatics (IOI) in 2014

Host Scientific Committee (HSC) Member   2013-present

ACM-ICPC Taiwan Council

Director (2013~)

Taiwan Algorithms and Computation Theory Council
Director (2013~)

ACM International Collegiate Programming Contest (ACM ICPC)
Judge Committee Chief, ACM Asia Programming Contest, Asia Taichung Site, 2014

ACM International Collegiate Programming Contest (ACM ICPC)
Judge Committee Chief, ACM Asia Programming Contest, Asia Chia-Yi Site, 2013

2013 ACM-ICPC Southern Taiwan Group A/B Invitational Programming Contest
Committee Member   2013

National Cheng Kung University, Tainan, Taiwan   2010/8/1-2015/7/31
Director, Institute of Manufacturing Information and Systems

National Cheng Kung University, Tainan, Taiwan   2009-present
Distinguished Professor, Department of Computer Science and Information
Engineering

National Cheng Kung University, Tainan, Taiwan   2006-2009
Full Professor, Department of Computer Science and Information Engineering

National Cheng Kung University, Tainan, Taiwan   2003-2006
Associate Professor, Department of Computer Science and Information Engineering

National Cheng Kung University, Tainan, Taiwan   2002-2003
Assistant Professor, Department of Computer Science and Information Engineering

National Chi Nan University, Nantou, Taiwan   2000-2002
Assistant Professor, Department of Computer Science and Information Engineering

Ministry of Education, Taiwan   2009-2012
Project Member, Project of Programming Practice, Training, and Contest

ACM International Collegiate Programming Contest (ACM ICPC)   2009-present
Technological Committee Member, Taiwan Council

Ministry of Education, Taiwan   2006-2008
> **Project Member,** Project of Curriculum compendium of Senior High School

ACM International Collegiate Programming Contest (ACM ICPC)
                    2005、2006、2008、2010、2011、2012、2013、2014
> **Judge Committee Member**, ACM Asia Programming Contest, Taiwan Site

National Cheng Kung University, Tainan, Taiwan   2004-present
> **Member**, College affairs Committee of Electrical Engineering and Computer Science

National Collegiate Programming Contest (NCPC)
> **Chairperson of the Judge Committee,** Ministry of Education, Taiwan, 2012

National Collegiate Programming Contest (NCPC)
> **Judge Committee Member,** Ministry of Education, Taiwan, 2004-2006, 2008, 2009,
> 2011-2015

The ITSA National Collegiate Programming Contest
> **Judge Committee Chairperson,** Ministry of Education, Taiwan   2012-2014

National Cheng Kung University, Tainan, Taiwan   2003-2004
> **Member**, Student Rewards and Punishment Committee

National Cheng Kung University, Tainan, Taiwan   2002-2008
> **Coach,** the teams of Programming Contest of Department of Computer Science and
> Information Engineering

National Cheng Kung University, Tainan, Taiwan   2002-2003
> **Member**, School Affairs Committee

Academia Sinica, Taipei, Taiwan   2001-2003
> **Visiting Scholar,** Institute of Information Science

Honors and Awards

[44] Fellow, the Institution of Engineering and Technology (IET), 18 November, 2016

[43] Outstanding Research Award of Taiwan Ministry of Science and Technology (2016/03).

[42] 2015 K. T. Li Breakthrough Award issued by Institute of Information & Computing
Machinery (2016/2/22)

[41] Ph.D. Dissertation Award issued by Institute of Information and Computing Machinery

(IICM), Ph.D. student Chia-Wen Cheng, Dissertation title: A Study of Pancyclic Properties of Cartesian Product Graphs with Faulty Edges (2016/2/22)

[40] National Cheng Kung University Distinguished Professor Award (2015/8/1~2018/7/31)

[39] Best Ph.D. Dissertation Award issued by Association of Algorithm and Computation Theory (Ph.D. student Chun-An Chen), Dissertation title: (t, k)-Diagnosis of Multiprocessor Systems Dec. 2015

[38] Best Paper Award of International Conference on Computer and Information Sciences (ICCIS2015): Sun-Yuan Hsieh and Po-Cheng Hsu, "A Novel Dynamic IP Router-table Design for Internet".

[37] Y. Z. Hsu Scientific Paper Award, Far Eastern Y. Z. Hsu Science and Technology Memorial Foundation. Awarded paper: Chia-Hung Lin, Chia-Yin Hsu, and Sun-Yuan Hsieh, "A multi-index hybrid trie for IP lookup and updates," *IEEE Transactions on on Parallel and Distributed Systems*, vol. 25, no. 10, pp. 2486-2498, October 2014.

[36] Annual Best Paper Award of Taiwan Association of Cloud Computing: Chia-Wei Lee, Kuang-Yu Hsieh, Sun-Yuan Hsieh, and Hung-Chang Hsiao, "A dynamic data placement strategy for Hadoop in heterogeneous environments," *Big Data Research* (special issue on Scalable Computing for Big Data)*, vol. 1, pp. 14-22, August 2014.(2015/3/27)

[35] Outstanding Engineering Professor Award of Chinese Institute of Engineers, 2014. (2014/04)

[34] Outstanding Electric Engineering Professor Award of Chinese Institute of Electric Engineers, 2013. (2013/10/25)

[33] 2013 Information Month, Outstanding Information Technology Talented Person Award, 2013. (2013/10/11)

[32] Excellent Teacher Award of National Cheng Kung University, 2013/08.

[31] Outstanding Engineering Professor Award of Chinese Institute of Electric Engineers, Kaohsiung Branch, 2013. (2013/05/31)

[30] 2011 IEEE Outstanding Technical Achievement Award, IEEE Tainan Section, 2011/12/02.

[29] Fellow, the British Computer Society (BCS)-the Chartered Institute for IT, 2011/09/20.

[28] Outstanding Research Award of National Science Council, 2008. (2009/02/25)

[27] K.T. Li Research Award of K.T. Li Technology Lectureship, 2007.

[26] Engineering Professor Award of Chinese Institute of Engineers, Kaohsiung Branch, 2008. (2008/06/06)

[25] President's Citation Award, American Biographical Institute. (2007/06)

[24] Biographical data included in Who's Who in Asia, 2nd Edition, 2012.

[23] IEEE Senior Member.

[22] ACM Senior Member. (2009/04/20)

[21] Excellent Educator of College of Electrical Engineering & Computer Science, National Cheng Kung University, 2006.

[20] Outstanding Educator of National Cheng Kung University, 2006.

[19] International Educator of the Year 2006, International Biographical Centre, Cambridge, England, 2006.

[18] 2000 Outstanding Scientists of the 21st Century, International Biographical Association, International Biographical Centre, England. (2005/04)

[17] Great Minds of the 21st Century, American Biographical Institute, Inc., 2005. (2005/05)

[16] Biographical data included in Who's Who in the World, 30th Edition, 2013.

[15] Biographical data included in Who's Who in the World, 2011 Edition.

[14] Biographical data included in Who's Who in the World, 27th Edition, 2010.

[13] Biographical data included in Who's Who in the World, 26th Edition, 2009.

[12] Biographical data included in Who's Who in America, 63rd Edition, 2009.

[11] Biographical data included in Who's Who in Science and Engineering, 2011-2012 Edition.

[10] Biographical data included in Who's Who in Science and Engineering, 10th Edition, 2008-2009. (2007/09)

[9] Biographical data included in Who's Who of Emerging Leader, 1st Edition, 2007.

[8] Biographical data included in Who's Who in Asia, 1st Edition, 2007.

[7] Biographical data included in Who's Who in Science and Engineering, 8th Edition, 2005-2006.

[6] Coach of NCKU, the 2008 National Collegiate Programming Contest, 3rd Prize & Excellent Award. (2008/10/18)

[5] Coach of NCKU, the 2009 National Collegiate Programming Contest, Excellent Award. (2007/10/19)

[4] Coach of NCKU, the 2006 National Collegiate Programming Contest, 3rd Prize. (2006/10/21)

[3] Coach of NCKU, the 2005 National Collegiate Programming Contest, Excellent Award. (2005/10/15)

[2] Coach of NCKU, the 2004 ACM Asia Programming Contest, 10th and 12nd Prizes. (2004/11/06-2004/11/07)

[1] Coach of NCKU, the 2004 National Collegiate Programming Contest, Excellent Award. (2004/10/16)

Editorships

[33] Associate Editor of "International Journal of Computer Mathematics: Computer Systems Theory," http://www.tandfonline.com, (Taylor & Francis Group), 2017-present

[32] Managing Editor of "Journal of Interconnection Networks," http://www.worldscientific.com/worldscinet/join, World Scientific, 2017/2/1-

[31] Associate Editor of "Journal of Computer and System Sciences," ELSEVIER SCIENCE BV, Netherlands, 2016/10.

[30] Associate Editor of "IEEE Transactions on Reliability,"
IEEE Reliability Society, 2015/10/23~2017/11/1

[29] Associate Editor of "IEEE ACCESS,"
http://www.ieee.org/publications_standards/publications/ieee_access/associate_editors.html, IEEE Society, 2015/3~

[28] Special issue guest editor of IEEE Transactions on Emerging Topics in Computing, Emerging Topics in the Design of High Performance Internet Routers (Fourth Issue of 2015)

[27] Editor of "Discrete Mathematics, Algorithms and Applications (DMAA),"
http://www.worldscientific.com/page/dmaa/editorial-board, World Scientific Publishing Co. 5 Toh Tuck Link, Singapore 596224, 2015-

[26] **Editor of** "British Journal of Mathematics & Computer Science,"
http://www.sciencedomain.org/journal-home.php?id=6), SCIENCEDOMAIN international, Guest House Road, Street no - 1/6, Tarakeswar, Hooghly, WB, 712410, India, Corp. 2015-.

[25] **Editor of "**Discrete Applied Mathematics," (DAM)
http://www.journals.elsevier.com/discrete-applied-mathematics/editorial-board/, ELSEVIER SCIENCE BV, Netherlands, 2015-2017.

[24] **Editor of "**Aperito Journal of Computer Science and Biology - Open Access,"
http://aperito.org/journal/ebm_display/27, Aperito online Publishing, S. Bascom Avenue, Suite 700, Campbell, CA, 95008, USA, 2015/01-present

[23] **Editor of "**Aperito Journal of Computer Science and Biology,"
http://aperito.org/Journals/computer-science-biology-Ebmember.php, 2014/09-present

[22] **Editor of "**Journal of Supercomputing,"
http://www.springer.com/computer/swe/journal/11227?detailsPage=editorialBoard, Springer, 2014/07-present

[21] **Editor of "**International Journal of Advanced Engineering Science and Information Technology (IJAESIT)," http://www.ijaesit.org, India, 2014/05-present

[20] **Editor of "**Journal of Applied Mathematics,"
http://www.hindawi.com/journals/jam/editors/, Hindawi Publishing Corporation, Egypt, 2014/05-present

[19] **Regional Editorial of** "Information Technology Segment Journal,"
http://www.segmentjournals.com/, Rome, Italy, 2014/02-present

[18] **Editor** of "International Journal of Multimedia Technology, " http://www.ijmt.org/, (American V-King Scientific Publishing), 2014/01-present

[17] **Editor** of "Journal of Interconnection Networks,"
http://www.worldscientific.com/worldscinet/join, (World Scientific), 2014-2016

[16] **Associate Editor of** "lnternational Journal of Computer Mathematics,"
http://www.tandfonline.com, (Taylor & Francis Group), 2013/08-present

[15] **Editorial advisory board member of** "The Open Numerical Methods Journal," http://benthamscience.com/open/tonumj/MSandI.htm, (Bentham OPEN), Bentham Science Publishers

[14] **Editor** of "American Open Algorithm Journal," http://www.rekpub.com/American%20Open%20Algorithm%20Journal/Editor%20Board .php, Research and Knowledge Publication, New York, USA, 2013-present

[13] **Editor** of "Indo-American Journal of Computer Sciences (IAJCS)," http://www.iajcs.com, Meghana Publications, India, 2013-present

[12] **Editor** of "International Journal of Information Technology and Computer Engineering (IJITCE)," http://www.ijitce.com, Meghana Publications, India, 2013-present

[11] **Editor** of "Current Advances in Information Security (CAIS)," http://www.vkingpub.com/cais/editorialBoard.aspx, American V-King Scientific Publishing, LTD, 2013-present.

[10] **Editor** of "Fundamental Informaticae," http://fi.mimuw.edu.pl/index.php/FI/about/editorialTeam, Polish Mathematical Society, Poland (under the installation process of new editors, waiting an official approval of the Polish Mathematical Society).

[9] **Editor** of "International Journal of Advanced Computer Science and Information Technology," http://technical.cloud-journals.com/index.php/IJACSIT, Helvetic Editions, Switzerland, 2013-present.

[8] **Editor** of "Theoretical Computer Science," http://www.journals.elsevier.com/theoretical-computer-science/editorial-board/, ELSEVIER SCIENCE BV, Netherlands, 2012-present.

[7] **Editor** of "International Journal of Computer Science and Artificial Intelligence (IJCSAI)," http://www.jcsai.org/Editorialboard.aspx, Islamic Jurisprudence Council of Minnesota, USA (2012/1/5)

[6] **Editor** of "Journal of Information Security (JIS)", http://www.scirp.org/journal/jis/, Scientific Research Publishing, USA, 2010/03/02-present.

[5] **Associate Editor** of "International Journal of Future Generation Communication and Networking," http://www.sersc.org/journals/IJFGCN/, Science & Engineering Research Support Society, Australia, 2008-present.

[4] **Editor** of "Journal of Mathematical Sciences: Advances and Applications," http://scientificadvances.org/journals1P2.htm, Scientific Advances Publishers, INDIA, 2008-present.

[3] **Editor** of "Journal of Information Technology and Applications," http://140.126.5.184/Jita_web/index.htm, Chung Hua University, TAIWAN, 2007-present.

[2] **Editor** of "Asian Journal of Information Technology," http://www.medwelljournals.com/eboard.php?jid=1682-3915, Medwell Publishing,

Scientific Research Publishing Company, USA, 2007-present.

[1] **Editor** of "Antarctica Journal of Mathematics,"
http://www.domainsmoon.com/ajm/editors/editors2007.html, INDIA, 2007-present.

International Conference Organizing Committee

[95] Program committee of the 3rd IEEE International Conference on Big Data Intelligence and Computing (IEEE DataCom 2017), November 6-10, 2017, Orlando, Florida, USA. URL: https://grid.chu.edu.tw/datacom2017/index.php

[94] Program Committee, 21st International Symposium on Fundamentals of Computation Theory (FCT 2017), September 11-13, 2017, Bordeaux, France. URL: http://fct2017.labri.fr/

[93] Technical Program Committee, 17th IEEE International Conference on Computer and Information Technology, August 21-23, 2017, Helsinki, Finland. URL: https://research.comnet.aalto.fi/CIT2017/

[92] Program Committee Member, the 15th IEEE International Conference on Ubiquitous Computing and Communications, December 14-16, 2016, Granada, Spain https://www.arcos.inf.uc3m.es/wp/iucc2016/program-committee/

[91] Program Committee Member, COCOA 2016 (the 10th International Conference on Combinatorial Optimization and Application), December 16-18, 2016, Hong Kong SAR, China.

[90] Program Committee, the Tenth International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM 2016), October 9 - 13, 2016 - Venice, Italy. URL: http://iaria.org/conferences2016/ComUBICOMM16.html

[89] Advisory Committee Member, 2nd International Conference on Big-data, IoT, Cloud computing Technologies and Applications (BICTA 2016), March 24 ~ 26, 2016, Hyatt Regency Jeju, Jeju Island, Korea. https://sites.google.com/site/ibicta2016/organization

[88] Program Committee Member, COCOA 2015 (the 9th International Conference on Combinatorial Optimization and Application), Dec. 18-21, 2015 in Houston, USA, http://theory.utdallas.edu/COCOA2015/org.html.

[87] **Program Committee Member**, the 2015 Global Conference on Information Technology, Computing, and Applications (GlobalIT 2015), Las Vegas, USA, January 13~15, 2015, http://www.globalitconf.org/2015/

[86] **Program Committee Member**, the 6th International Conference on Computer Science and Software Engineering (CSSE 2015), Suzhou, China, November 20-22, 2015, http://www.engii.org/ws/OrganizingCommittee.aspx?id=584\

[85] **Program Committee Member**, the 14th IEEE International Conference on Computer and Information Technology (CIT-2014), Xi'an, China, 11-13 September 2014, http://meeting.xidian.edu.cn/conference/cit2014/

[84] **Program Committee Member**, the 2014 FTRA International Symposium on

Ubiquitous Green IT Systems (U-GIT 2014), July 7-10, 2014, Jeju, Korea, http://www.ftrai.org/ugit2014/pc.php

[83] **Program Committee Member**, International Conference on Eco-friendly Computing and Communication System (ICECCS 2014), 18-21 December 2014, at Mangalore, India, http://www.iceccs2014.nitk.ac.in/committee

[82] **Program Committee Member**, the FTRA 10th International Symposium on Wireless sensor network Technologies and Applications (WTA 2014), August 21-23, 2014, Krakow, Poland, http://www.ftrai.org/wta2014/

[81] **Program Committee Member**, the 2014 International Workshop on Sustainable Computing and Green IT Services (SusCom IT-14), Ostrava, Czech Republic, August 25-27, 2014, http://www.ftrai.org/suscomit2014

[80] **Technical Program Committee Member**, the 4th International Conference on Multimedia Technology (ICMT 2015), Sydney, Australia, March 28-29, 2015, http://www.conficmt.org/OrganizingCommittee.html

[79] **Program Committee Member**, the 6th FTRA International Conference on Computer Science and its Applications (CSA-14) in Guam, USA, Dec. 17-20, 2014, http://www.ftrai.org/csa2014/

[78] **Organization Committee Member**, The 2014 Taiwan-China Workshop on Network Fault-tolerance and Fault Diagnosis, Fujian Normal University, July 24-26, 2014, http://www.fjtu.edu.cn/s/2/t/250/38/de/info80094.htm

[77] **Program Committee Member**, The 2014 International Symposium on Information and Communication Technology, Zhangjiajie, China, May 28-31, 2014, http://www.ftrai.org/ict2014

[76] **Program Committee Member**, The 2014 International Workshop on Advanced Multimedia Computing (AMC-14), April 23-25, 2014, Jeju, Korea, http://www.ftrai.org/amc2014

[75] **Program Committee Member**, International Workshop on Theories and Applications of Graphs (iTAG 2014), July 30, Khon Kaen, Thailand 2014, http://itag2014.ntcb.edu.tw/

[74] **Technical Program Committee Member**, the 12th International Symposium on Autonomous Decentralized System (ISADS 2015), March 25-27, Taichung, TAIWAN 2015, http://isads2015.asia.edu.tw/

[73] **Technical Program Committee Member**, the International Conference on Smart Electronics and Communication (SEC2014), August 18th-20th, Dalian, China. 2014, http://www.secconf.org/organizingCommittee.html

[72] **Program Committee Member**, the Sixth International Conferences on Advanced Service Computing SERVICE COMPUTATION 2014, Venice, Italy, May 25 - 29, 2014, http://www.iaria.org/conferences2014/SERVICECOMPUTATION14.html

[71] **Program Committee Member**, the 5th FTRA International Conference on Creative

Converged IT (CCIT 2014), Daejeon, Korea, April 9-12, 2014, http://www.ftrai.org/ccit2014/

[70] **Technical Program Committee Member**, the 2014 International Conference on Computer Science and Service System (CSSS 2014), June 13th-15th, 2014, Bangkok, Thailand, http://www.csssconf.org/committee.html

[69] **Program Committee Member**, the 9th International Conference on Green, Pervasive and Cloud Computing (GPC-14), Wuhan, China, May 9-11, 2014, http://grid.hust.edu.cn/gpc2014/

[68] **Program Committee Member** on the 4th FTRA International Conference on Advanced IT, engineering and Management (FTRA AIM 2014), Jeju, Korea, Feb. 19-22, 2014.

[67]**Program Committee Member**, the FTRA 2013 International Symposium on Ubiquitous Computing and Embedded Systems (UCES-13), Danang, Vietnam, December 18 - 21, 2013, http://www.ftrai.org/workshop/uces2013

[66] **Program Committee Member**, the IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN'14), Innsbruck, Austria, 17-19 February 2014, http://www.iasted.org/conferences/home-811.html/

[65] **Program Committee Member**, The FTRA 9th International Symposium on Wireless sensor network Technologies and Applications for Smart Space (WTA 2013), Gwangju, Korea, September 4-6, 2013, http://www.ftrai.org/workshop/wta2013/

[64] **Technical Program Committee Member**, the 5th International Conference on Computer Science and Software Engineering (CSSE 2014), Shenzhen, China, 12-14 January 2014, http://www.engii.org/workshop/CSSE2014January/OrganizingCommittee.aspx

[63] **Program Committee Member**, track of "Ad-hoc, sensor, robot and opportunistic networks" in the 15th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2013), Osaka, Japan, 13-16 November 2013, http://www-masu.ist.osaka-u.ac.jp/sss2013/track_adhoc.html

[62] **Technical Program Committee Member**, the 12th IEEE International Conference on Ubiquitous in Computing and Communications (IUCC-2013), Melbourne, Australia, 16-18 July 2013

[61] **Program Committee Member**, the 15th IEEE International Conference on High Performance Computing and Communications (HPCC 2013), Zhangjiajie, China, November 13-15, 2013, http://trust.csu.edu.cn/conference/hpcc2013/

[60] **Program Committee Member**, the 5th FTRA International Conference on Computer Science and its Applications (CSA-13) "Advanced Computer Science and Applications for Converged IT environments," Danang, Vietnam, Dec. 18 - 21, 2013, http://www.ftrai.org/csa2013

[59] **Technical Program Committee Member**, the 2013 Conference on Computational and Systems Biology (CCSB), Sanya, China, 10-12, October 2012.

[58] **Program Committee Member**, 2013 Symposium on Cloud and Services Computing,

National Cheng Kung University, Feb 23 and 24, 2013.

[57] **Program Committee Member**, the IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN'13), Innsbruck, Austria, 15-17 February 2013

[56] **Technical Program Committee Member**, the 8th International Symposium on Wireless sensor network Technologies and Applications for Smart Space (WTA 2012, http://www.ftrai.org/wcc2012/wta), Jeju, November 22-25, 2012.

[55] **Program Committee Member**, the 3rd International Conference on Innovations in Bio-Inspired Computing and Applications (IBICA-2012), Kaohsiung, TAIWAN, 26-28 September 2012.

[54] **Technical Program Committee Member**, Workshop on Algorithms, Bioinformatics, and Computation Theory, the International Computer Symposium (ICS2012), Hualien, TAIWAN, 12-14 December 2012.

[53] **International Advisory Committee Member**, International Conference on Network Infrastructure Management System (NIMS- 2013), India.

[52] **Program Committee Member**, International Workshop on Intelligent Multimedia Computing and Communications, Kunming, People's Republic of China, 7 August, 2012

[51] **Program Committee Member**, the 24th IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS'12), Las Vegas, USA, 12-14 November 2012.

[50] **Program Committee Member**, the 11th International Conference on Ubiquitous Computing and Communications (IUCC-2012), Liverpool, England, UK, 25-27 June 2012.

[49] **Program Committee Member**, the 14th IEEE International Conference on High Performance Computing and Communications (HPCC-2012), Liverpool, England, UK, 25-27 June 2012.

[48] **Technical Program Committee**, the fourth International Conference on Cyberenabled distributed computing and knowledge discovery (CyberC 2012), Sanya, China, 10-12 October 2012

[47] **Program Committee Member** on the track of parallel algorithms and applications, the 17th IEEE International Conference on Parallel and Distributed Systems (ICPADS'11), Tainan, TAIWAN, 7-11 December 2011.

[46] **Program Committee Member**, the 2nd International Conference on Security-enriched Urban Computing and Smart Grids (SUComS 2011), National Dong Hwa University (http://www.ndhu.edu.tw), Hualien, Taiwan, 21-23 September 2011.

[45] **Program Committee Member**, the 3rd International Conference on Computer Science and its Applications (CSA-11) will be held on December 12-15, 2011 Jeju, Korea.

[44] **Program Committee Member**, the 13th International Conference on Distributed

Computing and Networking (ICDCN 2012), Hong Kong Polytechnic University, Hong Kong, China Jan., 2012

[43] **Program Committee Member**, the 10th IEEE/ACM International Conference on Ubiqutious Computing and Communications (IUCC 2011), Dalian, China, August 24-26, 2011.

[42] **Program Committee Member**, the 23rd IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS'11), Dallas, USA, 14-16 December 2011.

[41] **Program Committee Member**, the 11th IEEE International Conference on Scalable Computing and Communications (ScalCom-11), Cyprus, August 31 and September 2, 2011.

[40] **Program Committee Member**, the 6th International Conference on Grid and Pervasive Computing (GPC-2011), Oulu, Finland, May 11-13 2011.

[39] **Program Committee Member**, the 40th Annual Conference-2011 International Conference on Parallel Processing (ICPP-2011), Taipei, Taiwan, 13-16 September 2011

[38] **Program Committee Member**, the 18th International Colloquium on Structural Information and Communication Complexity (SIROCCO 2011), Gdansk, Poland, 20-22 June 2011.

[37] **Track Co-Chair**, the 6th International Conference on Future Information Technology (FutureTech 2011 Track 10: Bioinformatics and Bio-Inspired Computing), Grete, Greece, 28-30 June 2011.

[36] **Program Committee Member**, the IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN'11), Innsbruck, Austria, 15-17 February 2011.

[35] **Program Committee Member**, the First International Conference on Securityenriched Urban Computing and Smart Grid (SUComS 2010), Yousung Hotel, Daejeon, Korea, 15-17 September 2010.

[34] **Program Committee Member**, the 5th International Conference on Grid and Pervasive Computing, Hualien, Taiwan, ROC, 10-14 May 2010.

[33] **Program Committee Member**, the 10th IEEE International Conference on Scalable Computing and Communications (ScalCom-10), Bradford, UK, 29 June-1 July 2010.

[32] **Program Committee Member**, the 4th Annual International Frontiers of Algorithmics Workshop (FAW2010), Wuhan, China, August 11-13 2010.

[31] **Program Committee Member**, the 2010 International Conference on Future Generation Communication and Networking (FGCN 2010), Cebu, Philippines, November 11-13 2010.

[30] **Program Committee Co-Chairs**, the 2010 International Conference on Theoretical and Mathematical Foundations of Computer Science (TMFCS-10), 2010.

[29] **Program Committee Member**, the 2nd International Conference on Advanced

Communication and Networking (ACN 2010), INDIA, April 5-7 2010.

[28] **Program Committee Co-chair**, the 5th International Conference on Future Information Technology (FutureTech'10), Busan, Korea, 2010.

[27] **Program Committee Member**, the IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN'10), Innsbruck, Austria, 2010.

[26] **Program Committee Member**, the 2009 International Conference on Advanced Communication and Networking (ACN'09), Jeju Island, Korea, 2009.

[25] **Program Committee Member**, the IEEE International Conference on Scalable Computing and Communications (ScalCom'09), Dalian, China, 2009.

[24] **Program Committee Member**, the 15th IEEE International Conference on Parallel and Distributed Systems (ICPADS'09), Shenzhen, China, 2009.

[23] **Program Committee Member**, the IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN'09), Innsbruck, Austria, 2009.

[22] **Program Committee Co-Chairs**, the 2009 International Conference on Theoretical and Mathematical Foundations of Computer Science (TMFCS-09), Orlando, FL, USA, 2009.

[21] **Program Committee Member**, the 14th IEEE International Conference on Parallel and Distributed Systems (ICPADS'08), Melbourne, Victoria, Australia, 2008.

[20] Program Committee Member, the second International Conference on Future Generation Communication and Networking (FGCN'08), Hainan Island, China, 2008.

[19] **Program Committee Member**, the 2008 International Conference on Bio-Science and Bio-Technology (BSBT'08), Hainan Island, China, 2008.

[18] **Program Committee Member**, the 2008 International Conference on High Performance Computing, Networking and Communication Systems (HPCNCS-08), Orlando, FL, USA, 2008.

[17] **Program Committee Member**, the 2008 International Conference on Theoretical and Mathematical Foundations of Computer Science (TMFCS-08), Orlando, FL, USA, 2008.

[16] **Program Committee Member**, the IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN'08), Innsbruck, Austria, 2008.

[15] **Program Committee Member**, the first International Conference on Future Generation Communication and Networking (FGCN'07), Jeju-Island, Korea, 2007.

[14] **Program Committee Member**, the 2007 International Conference on Foundations of Computer Science (FCS'07), Las Vegas, USA, 2007.

[13] **Program Committee Member**, the 2007 International Conference on Bioinformatics and Computational Biology (BIOCOMP'07), Las Vegas, USA, 2007.

[12] **Program Committee Member**, the 2007 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'07), Las Vegas, USA, 2007.

[11] **Program Committee Member**, the 2007 International Conference on High Performance Computing, Networking and Communication Systems (HPCNCS-07),

Orlando, FL, USA, 2007.

[10] **Program Committee Member**, the 5th WSEAS International Conference on Applied Mathematics (MATH'06), Istanbul, Turkey, 2006.

[9] **Program Committee Member**, the 7th WSEAS International Conference on Mathematics and Computers in Biology and Chemistry (MCBC'06), Cavtat, Croatia, 2006.

[8] **Program Committee Member**, the 5th WSEAS International Conference on Telecommunications and Informatics (TELE-INFO'06), Istanbul, Turkey, 2006.

[7] **Program Committee Member**, the 2006 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'06), Las Vegas, USA, 2006.

[6] **Program Committee Member**, the IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN'06), Innsbruck, Austria, 2006.

[5] **Program Committee Member**, the 2005 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'05), Las Vegas, USA, 2005.

[4] **Program Committee Member**, the IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN'05), Innsbruck, Austria, 2005.

[3] **Program Committee Member**, the 2004 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04), Las Vegas, USA, 2004.

[2] **Program Committee Member**, the 2003 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'03), Las Vegas, USA, 2003.

[1] **Program Committee Member,** International Conference on Parallel and Distributed Systems (ICPADS), TAIWAN, 2002.

Local Conference Organizing Committee

[**21**] **Program Committee Member** on 34th Workshop on Combinatorial Mathematics and Computation Theory, Feng Chia University, 19-20 May, 2017.

[22] Round table discussion chair, 3rd Frontiers of Communications and Networking Workshop (FCN 2016), Institute of Information Science, Acdemia Sinica, 11 November 2016.

[**21**] **Program Committee Member** on 31th Workshop on Combinatorial Mathematics and Computation Theory, National Taipei Education University, April, 2014.

[20] **Program Committee Member** on Algorithm and Bioinformatics Workshop, National Computer Symposium (NCS), Asia University, 13–14 December, 2013.

[19] **Program Committee Member** on Algorithm and Bioinformatics Workshop, National Computer Symposium (NCS), ChiaYi, 2–3 December, 2011.

[18] **Program Committee Member,** 30th Workshop on Combinatorial Mathematics and Computation Theory, National Dong Wha University, 26–27 April, 2013.

[17] **Program Committee Member,** 29th Workshop on Combinatorial Mathematics and Computation Theory, National Taipei of College Business, 27–28 April, 2012.

[16] **Program Committee Member**, 28th Workshop on Combinatorial Mathematics and Computation Theory, 27–28 May, 2011.

[15] **Program Committee Member**, 27th Workshop on Combinatorial Mathematics and Computation Theory, Taichung, 2010.

[14] **Program Committee Member**, 26th Workshop on Combinatorial Mathematics and Computation Theory, Chayi, 2009.

[13] **Program Committee Member**, 25th Workshop on Combinatorial Mathematics and Computation Theory, Hsinchu, 2008.

[12] **Arrangement Committee Member**, 24thWorkshop on Combinatorial Mathematics and Computation Theory, Puli, Nantou, 2007.

[**11**] **Program Committee Member**, 11th Conference on Artificial Intelligence and Applications, Kaohsiung, 2006.

[10] **Program Committee Member**, 2006 Symposium on Digital Life and Internet Technologies, Tainan, 2006.

[9] **Arrangement Committee Member**, 23rdWorkshop on Combinatorial Mathematics and Computation Theory, Dacun, Changhua, 2006.

[8] **Session Chair**, National Computer Symposium (NCS'05), YongKang, Tainan, 2005.

[7] **Chair**, Infotainment of Education, 2005 Symposium on Digital Life and Internet Technologies, Tainan, 2005.

[6] **Chair**, 22nd Workshop on Combinatorial Mathematics and Computation Theory, Tainan, 2005.

[5] **Program Chair**, Workshop 1: Digital Perception and Interaction, 2004 Symposium on Digital Life and Internet Technologies, Tainan, 2004.

[4] **Program Committee Member**, 21st Workshop on Combinatorial Mathematics and Computation Theory, Wufeng, Taichung, 2004.

[3] **Session Chair and Program Committee Member**, 2003 Symposium on Digital Life and Internet Technologies, Tainan, 2003.

[2] **Program Committee Member**, 20th Workshop on Combinatorial Mathematics and Computation Theory, Minhsiung, Chiayi, 2003.

[1] **Program Committee Member**, National Computer Symposium (NCS'01), Taipei, 2001.

Reviewer

- Acta Mathematic Applicatae Sinica
- Algorithmica
- Applied Mathematics and Computation
- Discrete Applied Mathematics
- Discrete Mathematics
- Discrete Mathematics and Theoretical Computer Science
- Discussiones Mathematicae Graph Theory

- ✧ IEEE Transactions on Computers
- ✧ IEEE Transactions on Parallel and Distributed Systems
- ✧ IEEE Transactions on Very Large Scale Integration Systems
- ✧ Information Processing Letters
- ✧ Information Science
- ✧ International Journal of Computer and Applications
- ✧ International Transactions in Operational Research
- ✧ Journal of Combinatorial Optimization
- ✧ Journal of Information Science and Engineering
- ✧ Journal of Parallel and Distributed Computing
- ✧ Journal of Supercomputing
- ✧ Journal of Zhejiang University-SCIENCE A
- ✧ Mathematical and Computer Modelling
- ✧ Networks
- ✧ Theoretical Computer Science

Talks

[69] 2016/7/11~7/15 7th International Workshop on Optimal Network Topologies (IWONT 2016) at Tsinghua Sanya International Mathematics Forum (TSIMF), Invited talk: The Steiner Tree Problem and its Variants

[68] 2016/5/19 Department of Computer Science and Information Engineering, National Taiwan Ocean University. Talk title: The Steiner tree problem and its variants

[67] 2016/5/13 Keynote speech of the 33rd Workshop on Combinatorial Mathematics and Computation Theory, National Taiwan University

[66] 2015/7/23 Keynote speech of the 2015 Taiwan-China Workshop on Network Fault-tolerance and Fault Diagnosis, Fujian Normal University. Talk title: Pancyclicity and Bipancyclicity of Cartesian Product Graphs with Faulty Edges

[65] 2014/9/30, Department of Computer Science and Information Engineering, Chaoyang University of Technology, Wufeng District, Taichung, 41349 Taiwan, R.O.C.

[64] 2014/9/25, Department of Computer Science and Information Engineering, National Taiwan Ocean University, Jhongjheng District, Keelung City 202, Taiwan (R.O.C)

[63] 2014/7/26 Keynote speech of the 2014 Taiwan-China Workshop on Network Fault-tolerance and Fault Diagnosis, Fujian Normal University. Talk title: Conditional Connectivities on Interconnection Networks

[62] 2014/5/19, Department of Computer Science and Information Engineering, National Taiwan University of Science and Technology University

[61] 2014/5/15, Department of Information Management, Tunghai University

[60]2014/4/17, Department of Software Engineering , National Kaoshiung Normal University

[59] 2014/4/17, Department of Industrial Engineering and Industrial Management, National Tsing Hua University

[58] 2014/3/14, Department of Computer Science and Information Engineering, National Sun Yat-Sen University

[58] 2014/1/9, Department of Computer Science and Information Engineering, Tainan University

[57] 2013/12/26, Department of Computer Science and Information Engineering, National Taiwan Ocean University

[56] 2013/12/5, Department of Information Management and Department of Computer Science and Information Engineering, Southern Taiwan University of Science and Technology.

[55] 2013/12/3, Department of Information Engineering and Computer Science, Feng Chia University.

[54] 2013/11/28, Department of Digital Content Design and Management, Toko University.

[53] Keynote speech of 2013 The Workshop on Theoretical Computer Science, WTCS 2013, 2013/11/21~22, National Chiao Tung University, TAIWAN (This workshop is co-organized with The 3rd India-Taiwan Conference on Discrete Mathematics. Please visit http://www.math.nctu.edu.tw/amms201307/home.php for more details).

[52] 2013/5/14, Department of Computer Science and Information Engineering, Tamkang University.

[51] 2013/5/7, Department of Information Management, National Defense University.

[50] 2013/5/6, Department of Computer Science and Information Engineering, Tainan University.

[49] 2013/4/26~27 Keynote speech of the E-Learning and Information Technology Symposium 2013 (EITS2013), Southern Taiwan University of Science and Technology.

[48] 2013/4/26~27 Keynote speech of the 30 Workshop on Combinatorial Mathematics and Computation Theory, National Dong Hwa University. Talk title: The Internal Steiner Tree Problem: Max-SNP Hardness and Approximations.

[47] 2013/3/19, Department of Information Management, Tunghai University

[46] 2012/12/20, Department of Computer Science and Information Engineering, Hung Kung University.

[45] 2012/12/13, Department of Computer Science and Information Engineering, National Taipei University of Technology.

[44] 2012/12/10, Department of Computer Science and Information Engineering, National Kaohsiung University of Applied Sciences.

[43] 2012/11/26, Department of Electronic and Computer Engineering, National Taiwan University of Science and Technology.

[42] 2012/11/13, Department of Computer Science and Information Engineering, Kun Shan University.

[41] 2012/10/11, Department of Computer Science and Information Engineering, National Taiwan Ocean University.

[40] 2012/10/5, Department of Computer Science and Information Engineering, National Chung Cheng University.

[39] 2012/9/28, College of Science, National Chung Hsing University.

[38] 2012/3/16, Department of Computer Science and Information Engineering, National Chi Nan University

[37] 2011/11/24, Toko University.

[36] 2011/11/08, National United University.

[35] 2011/11/01, Chaoyang University of Technology.

[34] 2011/09/23, Ming Chuan University.

[33] 2011/06/13, National Chiayi University.

[32] 2011/05/31, Tunghai University.

[31] 2011/05/30, Overseas Chinese University.

[30] 2011/05/18, Taipei Municipal University of Education.

[29] 2011/05/17, National Kaohsiung University of Applied Sciences.

[28] 2011/05/09, National Taipei University of Technology.

[27] 2011/05/05, Tamkang University.

[26] 2011/04/25, National Chang Jung University.

[25] 2011/04/15, National Taipei University.

[24] 2011/03/28, National Tantung University.

[23] 2011/03/14, Southern Taiwan University.

[22] 2011/01/06, Yuan Ze University.

[21] 2010/12/31, National Chi Nan University.

[20] 2010/12/03, Department of Information Management, Tunghai University.

[19] 2010/11/30, Department of Computer Science and Information Engineering, National University of Kaohsiung.

[18] 2008/05/15, Department of Computer Science and Information Engineering, National University of Tainan.

[17] 2008/03/19, Department of Computer Science and Information Engineering, National Chiayi University.

[16] 2007/10/09, Department of Computer Science and Information Engineering, Ming Chuan University.

[15] 2007/06/22, Department of Computer Science and Information Engineering, National Chi Nan University.

[14] 2007/05/07, Department of Computer Science and Information Engineering, National Taipei University of Technology.

[13] 2007/05/04, Department of Electrical Engineering, National Yunlin University of Science and Technology.

[12] 2007/03/16, Department of Computer Science and Information Engineering, National Taiwan University.

[11] 2006/01/06, Department of Computer Science and Information Engineering, National Chi Nan University.

[10] 2003/12/16, Department of Computer Science and Information Engineering, National Taiwan Normal University.

[9] 2003/12/16, Department of Computer Science and Information Engineering, National Chung Cheng University.

[8] 2003/05/17, Department of Computer Science and Information Engineering, National Dong Hua University.

[7] 2003/04/21, Department of Computer Science and Information Engineering, National Taiwan Normal University.

[6] 2003/02/19, Department of Computer Science and Information Engineering, National Tsing Hua University.

[5] 2002/12/08, Department of Computer Science, National Chiao Tung University.

[4] 2002/10/04, Department of Computer Science and Information Engineering, National Cheng Kung University.

[3] 2002/01/11, Department of Computer Science and Information Engineering, National Dong Hua University.

[2] 2001/12/26, Department of Computer Science and Information Engineering, National Chi Nan University.

[1] 2001/09/30, Department of Computer Science and Information Engineering, National Taiwan Normal University.

Book Chapters

[2] Chia-Wei Lee and **Sun-Yuan Hsieh**, "Chapter 6: Diagnosability of Multiprocessor Systems," in Scalable Computing and Communications: Theory and Practice, pp. 97–124, Wiley-IEEE Computer Society Press, January 2013.

[1] **Sun-Yuan Hsieh**, Chaowen Huang, and Hsinhung Chou, "Chapter 9: DNA Computing for Subgraph Isomorphism Problem and Related Problems," in Algorithms in Computational Molecular Biology: Techniques, Approaches and Applications, Part 1: Strings Processing and application to Biological Sequences, Wiley Series in Bioinformatics, June 14, 2010.

Referred Papers

[112] Tai-Ling Ye, Dun-Wei Cheng, and <u>Sun-Yuan Hsieh</u>, "Improved Precise Fault Diagnosis Algorithm for Hypercube-Like Systems Based on the Comparison Diagnosis Model," *Journal of Interconnection Networks*, accepted.

[111] <u>Sun-Yuan Hsieh</u>, Chia-Wei Lee, and Chien-Hsiang Huang, "Conditional Edge-Fault

Hamiltonian-Connectivity of Restricted Hypercube-Like Networks," *Information and Computation*, accepted. (SCI)

[110] Chia-Chen We and Sun-Yuan Hsieh, "Random and Conditional (t,k)-Diagnosis of Hypercubes," *Algorithmica*, accepted. (SCI)

[109] Chia-Chen We and Sun-Yuan Hsieh, "h-Restricted Connectivity of Locally Twisted Cubes," *Discrete Applied Mathematics*, accepted. (SCI, EI)

[108] Chia-Chen Wei, Chun-An Chen, and Sun-Yuan Hsieh, "Conditional (t,k)-Diagnosis in Regular and Irregular Graphs Under the Comparison Diagnosis Model," *IEEE Transactions on Dependable and Secure Computing*, accepted. (SCI)

[107] Po-Cheng Hsu and Sun-Yuan Hsieh, "Multi-inherited Search Tree for Dynamic IP Router-tables," *IEEE Transactions on Computers*, accepted. (SCI, EI)

[106] Nai-Wen Chang and Sun-Yuan Hsieh, "Conditional Diagnosability of (n,k)-Star Graphs under the PMC Model," *IEEE Transactions on Dependable and Secure Computing*, accepted. (SCI)

[105] Yu-Huei Chang, Jinn-Shyong Yang, Sun-Yuan Hsieh, Jou-Ming Chang, Yue-Li Wang, "Construction Independent Spanning Trees on Locally Twisted Cubes in Parallel," *Journal of Combinatorial Optimization*, accepted. (SCI)

[104] Sun-Yuan Hsieh, Chi-Ting Chen, Chi-Hao Chen, Tzu-Hsiang Yen, Hung-Chang Hsiao, and Rajkumar Buyya, "Novel Scheduling Algorithms for Efficient Deployment of MapReduce Applications in Heterogeneous Computing Environments," *IEEE Transactions on Cloud Computing*, accepted.

[103] Li Xu, Limei Lin, Shuming Zhou, and Sun-Yuan Hsieh, "The extra connectivity, extra conditional diagnosability and t/m-diagnosability of arrangement graphs," *IEEE Transactions on Reliability*, vol. 65, no. 3, pp. 1248-1262, September 2016. (SCI)

[102] Yu-Chee Tseng and Sun-Yuan Hsieh, "Guest Editorial: Special Section on Emerging Topics in the Design of High Performance Internet Routers," IEEE Transactions on Emerging Topics in Computing, to appear. (SCI)

[101] Chia-Wen Cheng and Sun-Yuan Hsieh, "Edge-Fault-Tolerant Pancyclicity and Bipancyclicity of Cartesian Product Graphs with Faulty Edges," *Journal of Computer and System Sciences*, vol. 82, issue 5, pp. 767–781, August 2016. (SCI, EI)

[100] Limei Lin, Li Xu, Shuming Zhou, and Sun-Yuan Hsieh, The t/k-diagnosability for regular networks, *IEEE Transactions on Computers*, accepted. (SCI, EI)

[99] Sun-yuan Hsieh, Hong-Wen Huang, and Chia-Wei Lee, "{2,3}-Restricted connectivity of locally twisted cubes, *Theoretical Computer Science*, vol. 615, pp. 78-90, February 2016. (SCI, EI)

[98] Chia-Chen Wei, Chia-Wei Lee, Sun-Yuan Hsieh, and Sheng-Lung Peng, "1.67-Approximation Algorithm for the Partial-Terminal Steiner Tree Problem with Edge Cost 1 or 2," *Journal of Discrete Algorithms*, vol. 35, pp. 62-71, November 2015. SCI

[97] Sun-Yuan Hsieh and Yu-Chun Chou "A Faster cDNA Microarray Gene Expression Data Classifier for Diagnosing Diseases" *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 13, issue 1, pp. 43-54, Jan.-Feb. 1 2016. (SCI)

[96] Chia-Hung Lin and <u>Sun-Yuan Hsieh</u>, "Improving the Search Mechanism for Unstructured Peer-to-Peer Networks Using the Statistical Matrix Form," *IEEE Access*, vol. 3, pp. 926-941, 2015.

[95] Limei Lin, Li Xu, Shuming Zhou, and Sun-Yuan Hsieh, "The extra, restricted connectivity and conditional diagnosability of split-star networks," *IEEE Transactions on Parallel and Distributed Systems*, vol. 27, no. 2, pp. 533-545, February 2016. (SCI, EI)

[94] Nai-Wen Chang, Eddie Cheng, and <u>Sun-Yuan Hsieh,</u> "Conditional diagnosability of Cayley graphs generated by transposition trees under the PMC model," *ACM Transactions on Design Automation of Electronic Systems*, vol. 20, no. 2, article 20, February 2015. (SCI)

[93] Chia-Wen Cheng and <u>Sun-Yuan Hsieh,</u> "Fault-tolerant cycle embedding in Cartesian product graphs: edge-pancyclicity and edge-bipancyclicity with faulty edges," *IEEE Transactions on Parallel and Distributed Systems*, vol. 26, no. 11, November 2015. (SCI, EI)

[92] Chia-Wei Lee, Pin-Liang Chen, and <u>Sun-Yuan Hsieh</u>, "Weight-constrained and density-constrained paths in a tree: enumerating, counting, and k-maximum density paths," *Discrete Applied Mathematics*, vol. 180, pp. 126-134, January 2015. (SCI, EI)

[91] Chia-Wei Lee, Kuang-Yu Hsieh, <u>Sun-Yuan Hsieh</u>, and Hung-Chang Hsiao, "A dynamic data placement strategy for Hadoop in heterogeneous environments," *Big Data Research* (special issue on Scalable Computing for Big Data), vol. 1, pp. 14-22, August 2014.

[90] Chun-An Chen, Guey-Yun Chang, and **Sun-Yuan Hsieh**, "Conditional (t,k)-diagnosis in graphs by using the comparison diagnosis model," *IEEE Transactions on Computers,* vol. 64, no. 6, pp. 1622-1632, June 2015. (SCI, EI)

[89] Nai-Wen Chang, Wei-Hao Deng, and **Sun-Yuan Hsieh**, Conditional diagnosability of (n,k)-star networks under the comparison diagnosis model, *IEEE Transactions on Reliability*, vol. 64, no. 1, March 2015. (SCI)

[88] Chia-Wei Lee and **Sun-Yuan Hsieh**, "Diagnosability of component-composition graphs in the MM* model," *ACM Transactions on Design Automation of Electronic Systems*, accepted. (SCI)

[87] Nai-Wen Chang and **Sun-Yuan Hsieh**, "Structural properties and conditional diagnosability of star graphs by using the PMC model," *IEEE Transactions on on Parallel and Distributed Systems*, vol. 25, no. 11, pp. 3002-3011, November 2014. (SCI, EI).

[86] Chia-Wei Lee, Chao-Wen Huang, Wen-Hao Pi, and **Sun-Yuan Hsieh**, "An improved approximation ratio to the partial-terminal Steiner tree problem," *IEEE Transactions on*

Computers, vol. 64, no. 1, pp. 274-279, January 2015. (SCI, EI)

[85] Chia-Hung Lin, Chia-Yin Hsu, and **Sun-Yuan Hsieh**, "A multi-index hybrid trie for IP lookup and updates," *IEEE Transactions on on Parallel and Distributed Systems*, vol. 25, no. 10, pp. 2486-2498, October 2014. (SCI, EI)

[84] Tai-Ling Ye and **Sun-Yuan Hsieh**, "A scalable comparison-based diagnosis algorithm for hypercube-like networks," *IEEE Transactions on Reliability*, vol. 62, number 4, pp. 789-799, December 2013. (SCI)

[83] Chia-Wei Lee, Tsong-Jie Lin, and **Sun-Yuan Hsieh**, "Hamiltonicity of product networks with faulty elements," *IEEE Transactions on Parallel and Distributed Systems*, vol. 25, no. 9, pp. 2318-2331, September 2014. (SCI, EI)

[82] Nai-Wen Chang, Cheng-Yen Tsai, and **Sun-Yuan Hsieh**, "On 3-extra connectivity and 3-extra edge connectivity of folded hypercubes," *IEEE Transactions on Computers,* vol. 63, no. 6, pp. 1594-1600, June 2014.. (SCI, EI)

[81] Nai-Wen Chang and **Sun-Yuan Hsieh**, "(2,3)-Extraconnectivities of hypercube-like networks," *Journal of Computer and System Sciences*, vol. 79, issue 5, pp. 669-688, August 2013. (SCI, EI)

[80] Chun-An Chen and **Sun-Yuan Hsieh**, "t/t-Diagnosability of regular graphs under the PMC model," *ACM Transactions on Design Automation of Electronic Systems*, vol. 18, no. 2, article no. 20, March 2013. (SCI)

[79] Che-Nan Kuo, Hsin-Hung Chou, Nai-Wen Chang, and **Sun-Yuan Hsieh**, "Fault-tolerant path embedding in folded hypercubes with both node and edge faults," *Theoretical Computer Science*, vol. 475, pp. 82-91, March 2013. (SCI, EI)

[78] Chia-Wen Cheng, Chia-Wei Lee, and **Sun-Yuan Hsieh**, "Conditional edge-fault Hamiltonicity of Cartesian product graphs," *IEEE Transactions on Parallel and Distributed Systems*, vol. 24, no 10, pp. 1951-1960, October 2013. (SCI, EI)

[77] Yeim-Kuan Chang, Cheng-Chien Su, Yung-Chien Lin, and **Sun-Yuan Hsieh**, "Efficient Gray code based range encoding schemes for packet classification in TCAM," *IEEE/ACM Transactions on Networking*, vol. 21, issue 4, pp. 1201-1214, August 2013.

[76] Chao-Wen Huang, Chia-Wei Lee, Huang-Ming Gao, and **Sun-Yuan Hsieh**, "The internal Steiner tree problem: hardness and approximations," *Journal of Complexity*, vol. 29, issue 1, pp. 27-43, February 2013. (SCI)

[75] Nai-Wen Chang, Tzu-Yin Lin, and **Sun-Yuan Hsieh**, "Conditional diagnosability of k-ary n-cubes under the PMC model", *ACM Transactions on Design Automation of Electronic Systems*, vol. 17, issue 4, article no. 46, October 2012. (SCI)

[74] **Sun-Yuan Hsieh**, Cheng-Yen Tsai, and Chun-An Chen, "Strong diagnosability and conditional diagnosability of multiprocessor systems and folded hypercubes," *IEEE Transactions on Computers*, vol. 62, no. 7, pp 1472-1477, July 2013. (SCI, EI)

[73] **Sun-Yuan Hsieh** and Ying-Hsuan Chang, "Extraconnectivity of k-Ary n-Cube

Networks," *Theoretical Computer Science*, vol. 443, issue. 20, pp. 63–69, July 2012. (SCI, EI)

[72] Chun-An Chen and **Sun-Yuan Hsieh**, "Component-composition graphs: (t,k)-diagnosability and its application," *IEEE Transactions on Computers*, vol. 62, no. 2, pp. 1097-1110, June 2013. (SCI, EI)

[71] **Sun-Yuan Hsieh** and Chi-Ya Kao, "The conditional diagnosability of k-ary n-cubes under the comparison diagnosis model," *IEEE Transactions on Computers*, vol. 62, no. 4, pp. 839-843, April 2013. (SCI, EI)

[70] Won-Sin Hong and **Sun-Yuan Hsieh**, "Extra edge connectivity of hypercube-like networks," *International Journal of Parallel, Emergent and Distributed Systems*, vol. 28, issue 2, pp. 123-133, 2013. (SCI)

[69] Chao-Wen Huang, Hui-Ling Huang, and **Sun-Yuan Hsieh**, "Edge-bipancyclicity of star graphs with faulty elements," *Theoretical Computer Science*, vol. 412, issue 50, pp. 6938-6947, November 2011. (SCI, EI)

[68] Tsong-Jie Lin, **Sun-Yuan Hsieh**, and Justie Su-Tzu Juan, "Embedding cycles and paths in product networks and their applications to multiprocessor systems," *IEEE Transactions on Parallel and Distributed Systems*, vol. 23, no. 6, pp. 1081-1089, June 2012. (SCI, EI)

[67] Nai-Wen Chang and **Sun-Yuan Hsieh**, "Fault-tolerant bipancyclicity of faulty hypercubes under the generalized conditional-fault model," *IEEE Transactions on Communications*, vol. 59, issue 12, pp. 3400-3409, December 2011. (SCI)

[66] **Sun-Yuan Hsieh** and De-Wei Lai, "A new branch and bound method for the protein folding problem under the 2D-HP model," *IEEE Transactions on NanoBioscience*, vol. 10, no. 2, pp. 69-75, June 2011. (SCI)

[65] Won-Sin Hong and **Sun-Yuan Hsieh**, "Strong diagnosability and conditional diagnosability of augmented cubes under the comparison diagnosis model," *IEEE Transactions on Reliability*, vol. 61, no. 1, pp. 140-148, March 2012. (SCI)

[64] **Sun-Yuan Hsieh** and Ying-Chi Yang, "A Classified Multi-Suffix Trie for IP Lookup and Update," IEEE Transactions on Computers, *IEEE Transactions on Computers*, vol. 61, no. 5, pp. 726-731, May 2012. (SCI, EI)

[63] **Sun-Yuan Hsieh**, "On parallel recognition of cographs," *Theoretical Computer Science*, vol. 412, issues 8-10, pp. 686-694, March 2011. (SCI, EI)

[62] Chia-Wei Lee and **Sun-Yuan Hsieh**, "Pancyclicity of matching composition networks under the conditional fault model," *IEEE Transactions on Computers*, vol. 61 no. 2, pp. 278-183, February 2012. (SCI, EI)

[61] Chun-An Chen and **Sun-Yuan Hsieh**, "(t,k)-Diagnosis for component-composition graphs under the MM* model," *IEEE Transactions on Computers*, vol. 60, no. 12, pp. 1704-1717, December 2011. (SCI, EI)

[60] Chao-Wen Huang, Wun-Shiun Lee, and **Sun-Yuan Hsieh**, "An improved heuristic

algorithm for finding motif signals in DNA sequences," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 8, no. 4, pp. 959-975, July/August 2011. (SCI)

[59] Nai-Wen Chang and **Sun-Yuan Hsieh**, "Conditional diagnosability of augmented cubes under the PMC model," *IEEE Transactions on Dependable and Secure Computing*, vol. 9, no. 1, pp. 46-60, January/February 2012. (SCI)

[58] **Sun-Yuan Hsieh**, Yi-Ling Huang, and Ying-Chi Yang, "Multi-prefix trie: a new data structure for designing dynamic router-tables," *IEEE Transactions on Computers*, vol. 60, no. 5, pp. 693-706, May 2011. (SCI, EI)

[57] Che-Nan Kuo and **Sun-Yuan Hsieh**, "Pancyclicity and bipancyclicity of conditional faulty folded hypercubes," *Information Sciences*, vol. 180, issue 15, pp. 2904-2914, 1 August 2010. (SCI)

[56] **Sun-Yuan Hsieh** and Yi-Ru Cian, "Conditional edge-fault hamiltonicity of augmented cubes," *Information Sciences*, vol. 180, issue 13, pp. 2596-2617, July 2010. (SCI, EI)

[55] Chia-Wei Lee and **Sun-Yuan Hsieh**, "Determining the diagnosability of (1,2)-matching composition networks and its applications," *IEEE Transactions on Dependable and Secure Computing*, vol. 8, no. 3, pp. 353-362, May/June 2011. (SCI)

[54] Chia-Wei Lee and **Sun-Yuan Hsieh**, "Diagnosability of two-matching composition networks under the MM* model," *IEEE Transactions on Dependable and Secure Computing*, vol. 8, no. 2, pp. 246-255 March-April 2011. (SCI)

[53] **Sun-Yuan Hsieh** and Ting-Yu Chou, "The weight-constrained maximum-density subtree problem and related problems in trees," *Journal of Supercomputing*, vol. 54, no 3, pp. 366-380, Dec 2010. (SCI)

[52] **Sun-Yuan Hsieh** and Chia-Wei Lee, "Pancyclicity of restricted hypercube-like networks under the conditional fault model," *SIAM Journal on Discrete Mathematics*, vol. 23, no. 4, pp. 2010-2019, Jan 2010. (SCI, EI)

[51] **Sun-Yuan Hsieh** and Nai-Wen Chang, "Extended fault-tolerant cycle embedding in faulty hypercubes," *IEEE Transactions on Reliability*, vol. 58, no. 4, pp. 702-710, December 2009. (SCI)

[50] **Sun-Yuan Hsieh**, Che-Nan Kuo, and Hsin-Hung Chou," A further result on fault-free cycles in faulty folded hypercubes," *Information Processing Letters*, vol. 110, no. 2, pp. 41-43, December 2009. (SCI, EI)

[49] **Sun-Yuan Hsieh**, Che-Nan Kuo, and Hui-Ling Huang, "1-Vertex-fault-tolerant cycles embedding on folded hypercubes," *Discrete Applied Mathematics*, vol. 157, issue 14, pp. 3094-3098, July 2009. (SCI, EI)

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