



Wan Tat Chee

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[Dec. 10, 2015]

Working Experience

Working Experience

School of Computer Sciences, Universiti Sains Malaysia, Penang, Malaysia
Aug. 2011 — Present **Research, Academia and Administration**

Associate Professor in School of Computer Sciences, Lab Head for Network Research Group (NRG) & Domain Head for Wireless Research in National Advanced IPv6 Center of Excellence (NAV6). Research interests include: Wireless, Satellite, Sensor Mesh Networks, Quality of Service, Real Time Systems.

Education

Journal Publications/Book Chapters

Program Chairman for Computer Systems: Apr. 2005 — Dec. 2012

Nov. 2004 — Aug. 2011 **Academia, Administration and Research**

Senior Lecturer in School of Computer Sciences, Lab Head for Network Research Group (NRG) & Domain Head for Wireless Research in National Advanced IPv6 Center of Excellence (NAV6). Research interests include: Wireless, Satellite, Sensor Mesh Networks, Quality of Service, Real Time Systems.

Conference Publications

Supervision

Feb. 1998 — Nov. 2004 **Academia and Research**

Lecturer in School of Computer Sciences pursuing research into wireless computer networks. Research interests include: Wireless and Satellite Networks, Computer Network Protocols, Neural Networks, and Real Time Systems.

Grants

Honors and Societies

Research and Development, Motorola Malaysia Sdn. Bhd., Penang, Malaysia
Jan. 1997 — Jan. 1998 **Prototyping and Concept Development**

Senior Design Engineer responsible for new product and concept definition, liaison for radio option board interface specifications, as well as prototyping of new products for marketing feedback and special customer needs.

Apr. 1994 — Dec. 1996 **Software Development, Technical Supervision and System Design**

Design Engineer responsible for development of low level hardware interfacing drivers for LCD display control, user input validation and menuing control. Managed technical risks and system design in three projects. Undertook project planning and schedule management in one project. Implemented new pseudo-trunking protocol for Korean market. Developed modular radio software framework specifications.

Dept. of Electrical and Computer Engineering, Univ. of Miami, Florida, USA

Jan. 1991 — Mar. 1994 **Neural Network Applications & Object Oriented Databases Devpt.**

Research Assistant undertaking research into neural-networks applications and computer networks, as well as involvement in the preparation of research grant proposals. Research Associate responsible for design and development of an object-oriented Medical Information System in C++ starting in Sept. 1993.

Microsoft Corporation, Redmond, Washington, USA
June 1992 — Aug. 1992 **Networking Software Testing**

Software Engineer in Test Design Intern responsible for test-plan generation and execution. Performed test verification of Windows NT networking components.

Instructional Support Facilities, Univ. of Miami, Florida, USA
June 1988 — Dec. 1990 **Computer System Administration**

System Administrator responsible for setup and maintenance of campus-wide Macintosh network, as well as maintenance of campus mainframe computer lab.

Education

[top](#)

School of Computer Sciences, Universiti Sains Malaysia, Penang, Malaysia
May 1999 — Sep 2004 **Doctor of Philosophy in Computer Science (conferred Aug. 2005)**

Dissertation: "Quality of Service (QoS) for Wireless Multicast Applications." [[PDF](#)]

Dept. of Electrical and Computer Engineering, Univ. of Miami, Florida, USA
Jan. 1991 — Aug. 1993 **Master of Science in Elec. and Computer Engineering**

GPA: 3.76/4.00

Thesis: "Edge Preserving Image Compression for Magnetic Resonance Imaging using DANN-based neural networks." [[PDF](#)]

Aug. 1987 — Dec. 1990 **Bachelor of Science in Elec. Engr., Computer Option**

GPA: 3.99/4.00 (Summa cum Laude)

Senior Project/Honors Thesis: "RIC (Radio frequency Interface Controller): ASIC based design of the RF Interface Controller for interfacing with the Motorola MC 68824 Token Bus Controller in a Radio Frequency LAN environment." [[PDF](#)]

Journal Publications/Book Chapters (Most Recent First)

[top](#)

In Press

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2015

- Ali Shanon Alsaadi, **Tat-Chee Wan**, Alhamza Munther, "Application of Harmony Search Optimization Algorithm to Improve Connectivity in Wireless Sensor Network with Non-Uniform Density," *Journal of Information Science and Engineering*, Vol. 31, No. 4, Jul. 2015, pp. 1475-1489. ISSN 1016-2364. [*ISI 2014 I.F.: 0.414*] [[Link](#)]
- Sima Ahmadpour, Zohreh Toghrayee, **Tat-Chee Wan**, "An Extended Discrete Autoregressive Model for Variable Bit Rate Video Traffic Encoded by Scalable Video Codec," *International Journal of Communication Systems (2015)*, 16 pages, Jul. 2015. Online ISSN 1099-1131 (Printed ISSN 1074-5351). [ISI Indexed] [[Link](#)]
- Pantea Keikhosrokiani, Nasriah Zakaria, Norlia Mustafa, **Tat-Chee Wan**, Muhammad-Imran Sarwar, Keyvan Azimi, "Wireless Networks in Mobile Healthcare," *Mobile Health: A Technology Roadmap*, Springer Series in Bio-/Neuroinformatics, Volume 5, 2015, pp. 687 - 726. Ed. S. Adibi, Springer, ISSN 2193-9349. [[Link](#)]
- Baidaa Hamza Khudayer, Mohammed M. Kadhum, **Wan Tat Chee**, "Multi-disjoint Routes Mechanism for Source Routing in Mobile Ad-hoc Networks," *Information Science and Applications*, Lecture Notes in Electrical Engineering, Volume 339 / 2015, 2015, pp. 189 - 204. Ed. K. Kim, Springer-Verlag, ISSN 1876-1100. [[Link](#)] [Scopus Indexed]
- Hadi Asharioun, Hassan Asadollahi, **Tat-Chee Wan**, Niyayesh Gharaei, "A Survey on Analytical Modeling and Mitigation Techniques for the Energy Hole Problem in Corona-

Based Wireless Sensor Network,” *Wireless Personal Communications*, Vol 81, No. 1, Mar. 2015, pp. 161-187. ISSN 0929-6212. [[Link](#)] [*ISI 2014 I.F.: 0.653*]

2014

- Alireza Taghizadeh, **Tat-Chee Wan**, Rahmat Budiarto, “A Fast Inter-Domain Network-based IP Mobility Scheme for Urban Areas,” *Journal of Communications and Networks*, Vol 16 No 6, Dec. 2014, pp. 645-655. ISSN 1229-2370. [*ISI 2013 I.F.: 0.747*]
- Sabri M. Hanshi, Mohammad M. Kadhum, **Tat-Chee Wan**, “Relative Velocity-based Forwarding Strategy for Vehicular Ad Hoc Networks,” *Information*, Vol. 17, No. 8, Aug. 2014, pp. 3833-3848. ISSN 1343-4500. [Scopus Indexed]
- Hadi Asharioun, Hassan Asadollahi, **Tat-Chee Wan**, Abdul Samad Ismail, “An Investigation into the Effect of Coronas on Using Balanced-Energy Scheme in Corona-Based Wireless Sensor Networks,” *Information*, Vol. 17, No. 2, Feb. 2014, pp. 627-635. ISSN 1343-4500. [Scopus Indexed]
- Hadi Asharioun, **Tat-Chee Wan**, “A Multi Transmission Range Scheme to Maximize Lifetime in the Corona-Based Wireless Sensor Networks,” *International Journal of Digital Content Technology and its Applications (JDCTA)*, Vol. 8, No. 2, Apr. 2014, pp. 52-59. ISSN 1975-9339.

2013

- Mohammed Zaki Hasan, **Tat-Chee Wan**, “Optimized Quality of Service for Real-Time Wireless Sensor Networks Using a Partitioning Multipath Routing Approach,” *Journal of Computer Networks and Communications*, Vol. 2013, Article ID 497157, 18 pages, Apr. 2013. ISSN 2090-7141. [[Link](#)] [Scopus Indexed]
- Yung-Wey Chong, **Tat-Chee Wan**, “Comparative Study on Hybrid Header Compression Over Satellite-Wireless Network,” *IETE Technical Review*, Vol. 30, No. 6, Nov.-Dec. 2013, pp. 461-472. ISSN 0256-4602. [[Link](#)] [*ISI 2012 I.F.: 0.705*]
- Abdulghani Ali Ahmed, Aman Jantan, **Tat-Chee Wan**, “Real-Time Detection of Intrusive Traffic in QoS Network Domains,” *IEEE Security & Privacy*, Vol. 11, No. 6, Nov.-Dec. 2013, pp. 45-53. ISSN 1540-7993. [[Link](#)] [*ISI 2012 I.F.: 0.962*]
- Sima Ahmadpour, **Tat-Chee Wan**, Zohreh ToghrayeeSemiroimi, Mohammed. M. Kadhum, “Characterizing the Long Tail Behavior of SVC Video Frame Size Distribution,” *International Journal of Digital Content Technology and its Applications (JDCTA)*, Vol. 7, No. 13, Sep. 2013, pp. 33-40. ISSN 1975-9339.
- Ali Abdulqader Bin Salem, **Tat-Chee Wan**, Yung-Wey Chong, Adel Nadhem Naeem, Sima Ahmadpour, Nibras Abdullah Faqera, “Review of Cross-layer Solutions for Packet Loss,” *International Journal of Advancements in Computer Technology (IJACT)*, Vol. 5, No. 10, June 2013, pp. 88-97, ISSN 2005-8039. [Scopus Indexed]
- Badiea Abdulkarem Mohammed, **Tat-Chee Wan**, “Handoff and Route Optimization in Mobile Networks Over IEEE 802.16e,” *International Journal of Mobile Computing and Multimedia Communications (IJMCMC)*, Vol. 5, No. 2, Apr-Jun. 2013, pp. 32-45. ISSN 1937-9412 [[Link](#)] [Scopus Indexed]
- Ammar Almomani, **Tat-Chee Wan**, Ahmad Manasrah, Altyeb Altaher, Mahmoud Baklizi, and Sureswaran Ramadass, “An Enhanced Online Phishing E-mail Detection Framework Based on “Evolving Connectionist System”,” *International Journal of Innovative Computing, Information and Control (IJICIC)*, Vol. 9, No. 3, Mar. 2013, pp. 1065-1086. ISSN 1349-4198 [[Link](#)] [ISI/Scopus Indexed]
- Ammar Almomani, B. B. Gupta, **Tat-Chee Wan**, Altyeb Altaher and Selvakumar Manickam, “Phishing Dynamic Evolving Neural Fuzzy Framework for Online Detection “Zero-day” Phishing Email,” *Indian Journal of Science and Technology*, Vol. 6, No. 1, Jan. 2013, pp. 3960-3964. ISSN 0974-6846. [[Link](#)] [ISI/Scopus Indexed]

2012

- Anas F. Bayan and **Tat-Chee Wan**, “In-Depth Understanding, Analysis and Classification of WiMAX Scheduling State-of-art for Effective Practical Scheduler Design and Development,” *IETE Technical Review*, Vol. 29, No. 6, Nov.-Dec. 2012, pp. 449-460. ISSN

0256-4602. [[Link](#)] [*ISI 2011 I.F.: 0.724*]

- Ammar Almomani, **Tat-Chee Wan**, Ahmad Manasrah, Altyeb Altaher, and Eman Almomani, “A survey of Learning Based Techniques of Phishing Email Filtering,” *International Journal of Digital Content Technology and its Applications (JDCTA)*, Vol. 6, No. 18, Oct. 2012, pp. 119-129. ISSN 1975-9339. [[Link](#)] [Scopus Indexed]
- Ali Shanoon, **Tat-Chee Wan**, and Wafaa Obeed, “The Multi-hop Cluster Transmission Of Information Method For Solving the Low Connectivity Problem In Wireless Sensor Networks With Non-uniform Density,” *International Journal of Innovative Computing, Information and Control (IJICIC)*, Vol. 8, No. 11, Nov. 2012, pp. 7641-7661. ISSN 1349-4198 [[Link](#)] [ISI/Scopus Indexed]
- Alireza Taghizadeh, **Tat-Chee Wan**, Rahmat Budiarto, Fa Toh Yap, and Azlan Osman, “A Performance Evaluation Framework For Network-based IP Mobility Solutions,” *International Journal of Innovative Computing, Information and Control (IJICIC)*, Vol. 8, No. 10(B), Oct. 2012, pp. 7263-7288. ISSN 1349-4198 [[Link](#)] [ISI/Scopus Indexed]
- Ammar ALmomani, **Tat-Chee Wan**, Altyeb Altaher, Ahmad Manasrah, Eman ALmomani, Mohammed Anbar, Esraa ALomari and Sureswaran Ramadass, “Evolving Fuzzy Neural Network for Phishing Emails Detection,” *Journal of Computer Science*, Vol. 8 No. 7, July 2012. pp. 1099-1107. ISSN 1549-3636 [[Link](#)] [Scopus Indexed]
- Faisal Y. Alzyoud, **Tat-Chee Wan**, “The effect of using P-XCAST routing protocol on many-to-many applications,” *International Arab Journal of Information Technology (IAJIT)*, Vol. 9, Issue 4, July 2012, pp. 314-321. ISSN 1683-3198 [[Link](#)] [*ISI 2011 I.F.: 0.127*]
- Ali Abdulqader Bin Salem and Tat-Chee Wan, “Survey of Cross-layer Designs for Video Transmission Over Wireless Networks,” *IETE Technical Review*, Vol. 29, No. 3, May-June 2012. pp. 229-247. ISSN 0256-4602 [[Link](#)] [*ISI 2011 I.F.: 0.724*]
- Mohammed A. Mahdi, Mohamed M. Abd-Eldayem, Salwa S. Elgamal and **Tat-Chee Wan**, “Security Analysis and Enhancement of Authentication in CDMA based on Elliptic Curve Cryptography,” *Research Journal of Information Technology*, Vol. 4, No. 3, 2012, pp. 106-123. ISSN 1815-7432 [[Link](#)] [Scopus Indexed]
- Muhammad-Imran Sarwar, **Tat-Chee Wan**, Pantea Keikhosrokiani, Sureswaran Ramadass, “ROHC Tunneling Protocol for Source Specific Multicast Architecture,” *2011 International Conference on Material Science and Engineering Technology (ICMSET 2011)*, Zhengzhou, Nov. 11-13, 2011, Advanced Materials Research, Vol. 462, 2012 (Material Science and Engineering Technology), pp. 881-885. ISSN 1662-8985. [[Link](#)] [Scopus Indexed]
- Mosleh M. Abu-Alhaj, Manjur SK, R. Sureswaran, **Tat-Chee Wan**, Imad J. Mohamad, and Ahmed M. Manasrah, “ITTP: A New Transport Protocol for VoIP Applications,” *International Journal of Innovative Computing, Information and Control (IJICIC)*, Vol. 8, No. 3(A), Mar. 2012, pp. 1879-1895. ISSN 1349-4198. [[Link](#)] [ISI/Scopus Indexed]

2011

- Hean-Loong Ong, Essam Natsheh, Tat-Chee Wan, “Routing with a density-based probabilistic algorithm for mobile ad-hoc networks,” *Journal of High Speed Networks*, Vol. 18 No 2, 2011, pp. 83-114. ISSN 0926-6801. [[Link](#)]
- Mahdi Zareei, Alireza Taghizadeh, Rahmat Budiarto, and **Tat-Chee Wan**, “EMS-MAC: Energy Efficient Contention-Based Medium Access Control Protocol for Mobile Sensor Networks,” *The Computer Journal*, Vol. 54 Issue 12, 2011, pp. 1963-1972. ISSN 0010-4620. [[Link](#)] [*ISI 2010 I.F.: 1.327*]
- A. Meulenber, **T. C. Wan**, “LEO-Ring-Based Communications Network,” *Physics Procedia*, Vol. 20, 2011, pp. 232-241. ISSN 1875-3892. [[Link](#)] [Scopus Indexed]
- Anas F. Bayan, **Tat-Chee Wan**, “A Review on WiMAX Multihop Relay Technology for Practical Broadband Wireless Access Network Design,” *Journal of Convergence Information Technology*, Vol. 6 No. 9, 2011, pp. 363-372. ISSN 1975-9320 [[Link](#)] [Scopus Indexed]
- Ammar Ali Deeb Al-Momani, **Tat-Chee Wan**, Karim Al-Saedi, Altyeb Altaher, Sureswaran Ramadass, Ahmad Manasrah, Loai Bani Melhiml and Mohammad Anbaar, “An Online Model on Evolving Phishing E-mail Detection and Classification Method,” *Journal of Applied Sciences*, Vol. 11 No. 18, 2011, pp. 3301-3307. ISSN 1812-5654 [[Link](#)] [ISI Journal]

- Ali Shanoon-Aiyal, **Tat-Chee Wan**, Sureswaran Ramadass, “Collective Information Transmission to Improve Connectivity of Non-Uniform Density Wireless Sensor Networks,” *Journal of Applied Sciences*, Vol. 11 No. 17, 2011, pp. 3169-3176. ISSN 1812-5654 [[Link](#)] [ISI Journal]
- Yung-Wey Chong, **Tat-Chee Wan**, “Header Compression Scheme in Point To Point Link Model Over Hybrid Satellite WIMAX Network,” *International Journal of Ad hoc, Sensor & Ubiquitous Computing (IJASUC)*, Vol. 2 No. 3, Sept. 2011, pp. 113-124. ISSN 0976-2205. [[Link](#)]
- Abdulghani Ali Ahmed, Aman Jantan, **Tat-Chee Wan**, “SLA-based Complementary Approach for Network Intrusion Detection,” *Computer Communications*, Vol. 34 Issue 14, Sept. 2011, pp. 1738-1749. ISSN 0140-3664 [[Link](#)] [**ISI 2010 I.F.: 0.815**]
- Yung-Wey Chong, Imad J. Mohamad, **Tat-Chee Wan**, “Header Compression Scheme over Hybrid Satellite-WiMAX Network”, *The Third International Conference on Networks & Communications (NeCoM 2011), Chennai, India, July 15-17, 2011*, Trends in Network and Communications, Vol. 197, Part 1, pp 167-176, Eds. D. C. Wyld, M. Wozniak, N. Chaki, N. Meghanathan and D. Nagamalai, Springer Berlin Heidelberg, 2011. ISBN 978-3-642-22543-7. [[Link](#)]
- Seyed-Amin Hosseini-Seno, Rahmat Budiarto, **Tat-Chee Wan**, “A Routing Layer-Based Hierarchical Service Advertisement and Discovery for MANETs,” *Ad Hoc Networks*, Vol. 9 Issue 3, May 2011, pp. 355-367. ISSN 1570-8705 [[Link](#)] [**ISI 2010 I.F.: 1.592**]
- Seyed-Amin Hosseini-Seno, Rahmat Budiarto, **Tat-Chee Wan**, “A Secure Mobile Ad hoc Network Based on Distributed Certificate Authority,” *Arabian Journal for Science and Engineering*, Vol. 36 No. 2, Mar 2011, pp. 245-257. ISSN 1319-8025 [[Link](#)] [**ISI 2010 I.F.: 0.224**]
- Ali Abdulqader bin Salem, **Tat-Chee Wan** & Chan Huah Yong, “Performance Optimization for Broadcasting Video Streaming Using Hybrid Multicast and Peer-to-Peer (Distributed Hash Table) Model,” *Journal of Communication and Computer*, Vol. 8, No. 2, Feb. 2011, pp. 134-142. ISSN 1548-7709
- Manjur S Kolhar, Mosleh Abu-Alhaj, Omar Abouabdalla, **Tat-Chee Wan**, Rahmat Budiarto & Ahmed M. Manasrah, “Conference Gateway for Heterogeneous Clients: Real Time Switching Clients and InterAsterisk eXchange Clients,” *International Journal of Innovative Computing, Information and Control (IJICIC)*, Vol.7 No.1, January 2011, pp. 395-406. ISSN 1349-4198 [[Link](#)] [**ISI 2010 I.F.: 1.664**]

2010

- Imad J. Mohamad, Yung-Wey Chong, **Tat-Chee Wan**, Putra Sumari, “Improving Client-Server Response Time Using IPv6 Header Suppression Over MPLS,” *International Journal of Computer Science and Information Security (IJCSIS)*, Vol. 8 No. 9, December 2010. pp. 121 – 126. ISSN 1947-5500 [[Link](#)]
- Anas F. Bayan, **Tat-Chee Wan** and Sureswaran Ramadass, “Delay Analysis and System Capacity Control for Mobile WiMAX Relay Networks” *Journal of Computer Science*, Vol. 6 No. 10, Oct. 2010. pp. 1108-1114. ISSN 1549-3636 [[Link](#)] [Scopus Indexed]
- Seyed-Amin Hosseini-Seno, **Tat-Chee Wan**, Rahmat Budiarto, Masashi Yamada, “Management of Energy Consumption on Cluster Based Routing Protocol for MANET,” *IEICE Transactions on Information and Systems*, Vol. E93-D No.3, 2010. pp. 550-559. ISSN 0916-8532 [[Link](#)] [**ISI 2009 I.F.: 0.396**]

2009

- Manjur S. Kolhar, Mosleh M. Abu-Alhaj, Omar Abouabdalla, **Tat-Chee Wan**, Ahmad M. Manasrah, “Comparative Evaluation and Analysis of IAX and RSW,” *International Journal of Computer Science and Information Security (IJCSIS)*, Vol. 6 No. 3, December 2009. pp. 250 – 252. ISSN 1947-5500 [[Link](#)]
- Seyed Amin Hosseini Seno, Rahmat Budiarto, **Tat-Chee Wan**, “SHSDAP: Secure Hierarchical Service Discovery and Advertisement Protocol in Cluster Based Mobile Ad hoc Network,” *World Applied Sciences Journal (WASJ)*, Vol. 7 (C&IT), 2009 (Special Issue for Computer & IT), ISSN 1818-4952 [[Link](#)] [ISI Journal]
- S. A. Hosseini-Seno, B. Pahlevanzadeh, **T. C. Wan**, R. Budiarto, M. M. Kadhum, “A

distributed resource-management approach in MANETs,” *Journal of Engineering Science and Technology (JESTEC)*, Vol. 4 Issue 2, June 2009. pp. 142 – 153. ISSN 1823-4690 [[Link](#)]

- Manjur S. Kolhar, Anas F. Bayan, **Tat-Chee Wan**, O. Abouabdalla, R. Sureswaran, “Heterogeneous multimedia sessions,” *Journal of Engineering Science and Technology (JESTEC)*, Vol. 4 Issue 2, June 2009. pp. 196 – 205. ISSN 1823-4690 [[Link](#)]

2008

- Way-Chuang Ang, **Tat-Chee Wan**, Kotaro Kataoka, Chee-Hong Teh, “Performance Evaluation of ROHC over Unidirectional Links using DVB-S Testbed,” *KEIO SFC JOURNAL*, Vol. 8 No. 2, 2008. pp. 33-48. ISSN 1347-2828 [[Link](#)]
- Essam Natsheh, **Tat-Chee Wan**, “Adaptive and Fuzzy Approaches for Nodes Affinity Management in Wireless Ad-Hoc Networks,” *International Journal of Mobile Information Systems (IJMIS)*, Vol. 4 No. 4 / 2008. pp. 273–295. ISSN 1574-017X [[Link](#)]
- Seyed Amin Hosseini Seno, Bahareh Pahlevanzadeh, **Tat-Chee Wan**, Rahmat Budiarto, Masoumaeh Ghahremani, “A New Approach CBRP Based Resource Information Management in MANETs,” *International Journal of Computer Science and Network Security (IJCSNS)*, Vol. 8 No. 5, May 30, 2008, pp. 301-308. ISSN 1738-7906 [[Link](#)]
- Wilson T.H. Woon, **Tat-Chee Wan**, “Performance Evaluation of IEEE 802.15.4 Wireless Multi-Hop Networks: Simulation and Testbed Approach,” *International Journal of Ad Hoc and Ubiquitous Computing (IAHUC)*, Vol. 3, No. 1, 2008. pp. 57-66. ISSN 1743-8225 [[Link](#)]

2007

- Chee-Hong Teh, **Tat-Chee Wan**, Rahmat Budiarto, Way-Chuang Ang, “Unidirectional Lightweight Encapsulation with Header Compression for IP Based Satellite Communication over DVB-S,” *Sustainable Internet: Third Asian Internet Engineering Conference, AINTEC 2007, Phuket, Thailand, November 27-29, 2007*, Lecture Notes in Computer Science, Volume 4866 / 2007, Nov 2007, pp. 99 - 113. Ed. S. Fdida and K. Sugiura, Springer-Verlag. [[Link](#)]
- Seyed Amin Hosseini Seno, Rahmat Budiarto, **Tat-Chee Wan**, “Survey and New Approach in Service Discovery and Advertisement for Mobile Ad Hoc Networks,” *International Journal of Computer Science and Network Security (IJCSNS)*, Vol. 7 No. 2, Feb 28, 2007, pp. 275-284. ISSN 1738-7906 [[Link](#)]

2006

- Hean-Loong Ong, **Tat-Chee Wan**, Hean-Kuan Ong, Sureswaran Ramadass, “Node Density Effects on Reactive Routing Protocols for Mobile Ad Hoc Wireless Networks,” *Technologies for Advanced Heterogeneous Networks II: Second Asian Internet Engineering Conference, AINTEC 2006, Pathumthani, Thailand, November 28-30, 2006*, Lecture Notes in Computer Science, Volume 4311 / 2006, Nov 2006, pp. 206 - 211. Ed. K. Cho, P. Jacquet, Springer-Verlag. [[Link](#)] [*ISI 2005 I.F.: 0.402*]
- Mohammed Saghir, **Tat-Chee Wan**, Rahmat Budiarto, “A New Cross-Layer Framework for QoS Multicast Applications in Mobile Ad hoc Networks,” *International Journal of Computer Science and Network Security (IJCSNS)*, Vol. 6 No. 10, Oct 30, 2006, pp. 142-151. ISSN 1738-7906 [[Link](#)]

2005

- Mohammed Saghir, **Tat Chee Wan**, Rahmat Budiarto, “Load Balancing QoS Multicast Routing Protocol in Mobile Ad Hoc Networks,” *Technologies for Advanced Heterogeneous Networks: First Asian Internet Engineering Conference, AINTEC 2005, Bangkok, Thailand, December 13-15, 2005*, Lecture Notes in Computer Science, Volume 3837 / 2005, Nov 2005, pp. 83 - 97. Ed. K. Cho, P. Jacquet, Springer-Verlag. [[Link](#)] [*ISI 2004 I.F.: 0.513*]

2001

- **Tat Chee Wan**, Chee Hoong Leong, Ronnie Chee Weng Thum, “Bandwidth Management for Intranets Using Multicast Firewalls,” *PERTANIKA Journal of Science and Technology Supplement* 9(2):159-172 (2001), Universiti Putra Malaysia Press, 2001. ISSN 0128-7680. Pre-print [[PDF](#)]

1994

- **Tat Chee Wan**, Christos Douligeris, “Improved estimator for a discretised learning routing algorithm,” *Electronics Letters*, IEE, Vol. 30, No. 2, 20th February, 1994. [[Link](#)]

Conference Publications (Most Recent First)

[top](#)

In Press

- N/A

2015

- Ali Abdulqader Bin Salem, Yung-Wey Chong, Sabri M. Hanshi, **Tat-Chee Wan**, “On the Optimizing of LTE System Performance for SISO and MIMO Modes,” *Proceedings of the IEEE Third International Conference on Artificial Intelligence, Modelling and Simulation (AIMS) 2015*, Kota Kinabalu, Malaysia, 2-4 Dec, 2015, pp. 412-416.
- Sabri M. Hanshi, Mohammed M. Kadhum, **Tat-Chee Wan**, "On Connectivity Analysis of Vehicular Ad hoc Networks in Presence of Channel Randomness," *4th International Conference on Internet Applications, Protocols and Services (NetApps 2015)*, Cyberjaya, Malaysia, 1-3 December 2015, pp. 94-99.
- Sabri M. Hanshi, Mohammed M. Kadhum, **Tat-Chee Wan**, "Density-aware Directional Forwarding Strategy for Vehicular Ad hoc Networks," *2015 IEEE 12th Malaysia International Conference on Communications (MICC'15)*, Kuching, Malaysia, 23-25 November 2015, pp. 129-134.
- Sabri M. Hanshi, Mohammad M. Kadhum, **Tat-Chee Wan**, “Theoretical Framework of Forwarding Strategy in Vehicular Ad Hoc Networks,” *Proceedings (eBook) International Workshop on Graph Algorithms (IWGA2015)*, Penang, Malaysia, 13 May, 2015, pp. 130-139. eISBN 978-967-394-214-5, Springer.

2014

- Ali Abdulqader Bin Salem, **Tat-Chee Wan**, Yung-Wey Chong, Imad J. Mohamad, “LTE Peak Data Rate Estimation Using Modified alpha-Shannon Capacity Formula,” *Proceedings of the 10th Asian Internet Engineering Conference (AINTEC) 2014*, Chiang Mai, Thailand, 26-28 Nov, 2014, pp. 9-14. [[Link](#)]
- Mohammad Ali Sarvghadi, **Tat-Chee Wan**, “Overview of Time Synchronization Protocols in Wireless Sensor Networks,” *Proceedings of the 2014 2nd International Conference on Electronic Design (2014 ICED)*, Penang, Malaysia, Aug. 19-21, 2014, pp. 204-209. [[Link](#)]

2013

- Ali Abdulqader Bin Salem, Yung-Wey Chong, Ali Shannon, **Tat-Chee Wan**, “Link adaptation framework for video transmission over WiMAX using MDP over cross-layer approach,” *Proceedings of the 2013 IEEE International Conference on Communication, Networks, and Satellite (2013 IEEE COMNETSAT)*, Yogyakarta, Indonesia, Dec. 3-4, 2013. [[Link](#)]
- Mohammad Ali Sarvghadi, **Tat-Chee Wan**, “An Experimental Methodology for Evaluation of Multi-Hop Medium Access Protocols of Wireless Sensor Networks,” *Proceedings of the 2013 International Conference on IEEE RFID Technology and Applications (2013 IEEE RFID TA)*, Johor Bahru, Malaysia, Sep. 4-5, 2013, pp. 1-6. [[Link](#)] [Scopus Indexed]

2012

- Fahimeh Rostami, **Tat-Chee Wan**, “E1PD: Enhanced 1-Persistence data dissemination protocol for vehicle Ad hoc networks in highway environments,” *Proceedings of the First IEEE International Symposium on Telecommunication Technologies (ISTT 2012)*, Kuala Lumpur, Malaysia, Nov. 26-28, 2012. pp. 137-141. [[Link](#)]
- Mohammed A. Mahdi, **Tat-Chee Wan**, “Multipath Cluster Based Routing Protocol for QoS Enhancement,” *Proceedings of the 3rd International Conference on Network Applications, Protocols and Services 2012 (NetApps 2012)*, Sintok, Malaysia, Sept. 19-20, 2012.
- Badiea Abdulkarem Mohammed, **Tat-Chee Wan**, “Qualified NEMO Fast Handoff and Routing Optimization in IEEE 802.16e Broadband Wireless Access Networks,” *Proceedings*

of the 3rd International Conference on Network Applications, Protocols and Services 2012 (NetApps 2012), Sintok, Malaysia, Sept. 19-20, 2012. pp. 72-77.

- Ahded Aboodi, **Tat-Chee Wan**, “Evaluation of WiFi-based Indoor (WBI) Positioning Algorithm,” *Proceedings of the 2012 Third FTRA International Conference on Mobile, Ubiquitous, and Intelligent Computing (MUSIC 2012)*, Vancouver, Canada, 26-28 June, 2012. pp. 260-264. [[Link](#)]
- Mohammed A. Mahdi and **Tat-Chee Wan**, “Performance Comparison of MANETs Routing Protocols for Dense and Sparse Topology,” *International Conference on Information and Computer Networks (ICICN 2012)*, Singapore, 26-28 Feb., 2012, International Proceedings of Computer Science and Information Technology, Vol 27 (2012), pp. 37-41. [[Link](#)]

2011

- Alireza Taghizadeh, **Tat-Chee Wan**, Rahmat Budiarto, “A comparative performance evaluation of inter-domain network-based IP mobility solutions,” *Proceedings of the 7th Asian Internet Engineering Conference (AINTEC) 2011*, Bangkok, Thailand, 9-11 Nov, 2011. pp. 136-139. [[Link](#)]
- Alireza Taghizadeh, **Tat-Chee Wan**, “A Network-Based IP Mobility Scheme for Fast and Global Handover in Cellular Networks,” *Proceedings 17th Asia Pacific Conference on Communications (APCC 2011)*, Kota Kinabalu, Sabah, Malaysia, 2-5 Oct, 2011. pp. 307-312. [[Link](#)]
- Ehsan Tabatabaei Yazdi, Amina Ahmed Mohamed, Mahdi Zareei, **Tat-Chee Wan**, “Enhanced Mobile Lightweight Medium Access Control Protocol for Wireless Sensor Networks,” *Proceedings 2011 IEEE Symposium on Wireless Technology and Applications (ISWTA 2011)*, Langkawi, Malaysia, 25-28 Sep, 2011. pp 151-155. [[Link](#)]
- Mahdi Zareei, Rahmat Budiarto, **Tat-Chee Wan**, “Study of Mobility Effect on Energy Efficiency in Medium Access Control Protocols,” *Proceedings 2011 IEEE Symposium on Computers & Informatics (ISCI 2011)*, Kuala Lumpur, Malaysia, 20-23 Mar, 2011. pp. 759-763. [[Link](#)]

2010

- Imad J. Mohamad, Yung-Wey Chong, Bahareh Pahlevanzadeh, **Tat-Chee Wan**, Putra Sumari, “Effect of Real Time IPv6 Header Suppression over MPLS on Heterogeneous Traffic,” *Proceedings 2010 International Conference on Future Information Technology (ICFIT2010)*, Changsha, China, 14-15 Dec, 2010. pp. V2-41 – V2-45.
- Muhammad-Imran Sarwar, Yung-Wey Chong, Way-Chuang Ang, **Tat-Chee Wan**, “Performance Evaluation of VOIP Multi-Frame Packing with Robust Header Compression (ROHC) for WiMAX Network,” *Proceedings 2010 International Conference on Intelligent Network and Computing (ICINC 2010)*, Kuala Lumpur, Malaysia, 26-28 Nov, 2010. pp. V2-370 – V2-374.
- Alireza Taghizadeh, **Tat-Chee Wan**, Rahmat Budiarto, “Scalable Network Controlled Handover with Aggregated Binding Scheme in IP-based Cellular Networks,” *Proceedings of Asian Internet Engineering Conference (AINTEC) 2010*, Bangkok, Thailand, 15-17 Nov, 2010. pp. 72-79. [[Link](#)]
- Mohammad Sazid Zaman Khan, Tan Chen Wei, **Wan Tat Chee**, Sureswaran Ramadass, “Identifying the Characteristics of a Network Selection Module for Fourth Generation Communication Network,” *Proceedings of the 2010 International Conference on Intelligence and Information Technology (ICIIT 2010)*, Lahore, Pakistan, 28-30 Oct, 2010.
- Shoa-Yei Yeong, Wafaa A.H. Al-Salihy, **Tat-Chee Wan**, “Indoor WLAN Monitoring and planning using Empirical and Theoretical Propagation Models,” *Proceedings of the 2nd International Conference on Network Applications, Protocols and Services 2010 (NetApps 2010)*, Sintok, Malaysia, Sept. 22-23, 2010. [[Link](#)]
- Badiea Abdulkarem Mohammed, **Tat-Chee Wan**, “Modified Fast-Integrated Light-NEMOV6 Handoff in IEEE 802.16e BWA Networks,” *Proceedings of the 2nd International Conference on Network Applications, Protocols and Services 2010 (NetApps 2010)*, Sintok, Malaysia, Sept. 22-23, 2010. [[Link](#)]
- Ali Shanoon Aiya, Ayad Hussain Abdulqader, **Tat-Chee Wan**, Wafaa Nassar Obeed, “A New Learning Algorithm for Hopfield Neural Network to Cope Retrieving the Stored Pattern

in a Reversed Color State Problem,” *Proceedings of the 3rd International Conference on Advanced Computer Theory and Engineering (ICACTE 2010)*, Chengdu, China, Aug. 20-22, 2010. [[Link](#)]

- Armanda Caesario Cornelis, Rahmat Budiarto, **Wan Tat Chee**, “Low latency Binding Update Mechanism Using MIPv6 for Mobile Internet Television,” *Proceedings of the International Conference on Distributed Framework and Applications 2010 (DFMA 2010)*, Jogjakarta, Indonesia, Aug. 2-3, 2010, pp. 261-264
- Mustafa Abdat, **Tat-Chee Wan**, “Survey on Indoor Wireless Positioning Technique: Towards Adaptive Systems,” *Proceedings of the International Conference on Distributed Framework and Applications 2010 (DFMA 2010)*, Jogjakarta, Indonesia, Aug. 2-3, 2010, pp 33 – 37.
- Anas F. Bayan, **Tat-Chee Wan**, “Flexible System Capacity Control Technique for WiMAX Multi-Hop Relay Networks,” *Proceedings of 2010 the 3rd IEEE International Conference on Computer Science and Information Technology (IEEE ICCSIT 2010)*, Chengdu, China, July 9-11, 2010, pp 682 – 686. [[Link](#)]
- Anas F. Bayan, **Tat-Chee Wan**, “A Scalable QoS Scheduling Architecture for WiMAX Multi-hop Relay Networks,” *Proceedings of 2010 2nd International Conference on Education Technology and Computer (ICETC 2010)*, Shanghai, China, June 22-24, 2010, Vol. 5, pp 326 – 331. [[Link](#)]
- Rafiza Ruslan, **Tat-Chee Wan**, “Wi-Fi Load Balancing using Cognitive Radio Techniques,” *Proceedings of The 4th International Symposium on Information Technology 2010 (ITSIM 2010)*, Kuala Lumpur, Malaysia, June 15-17, 2010, pp 332 – 336. [[Link](#)]
- Anas F. Bayan, **Tat-Chee Wan**, “On-Demand Flexible Tiered QoS Scheduling Algorithm for IEEE 802.16j Multi-Hop Relay Networks,” *Proceedings of The 4th International Symposium on Information Technology 2010 (ITSIM 2010)*, Kuala Lumpur, Malaysia, June 15-17, 2010, pp 586 – 591. [[Link](#)]
- B. Pahlevanzadeh, A.R. Shirazinejad, T.C. Wan, “Application of Radio Frequency Identification (RFID) towards Green Environment,” *Proceedings International Conference on Environmental Research and Technology (ICERT 2010)*, Penang, Malaysia, June 2-4, 2010.
- Alireza Taghizadeh, **Tat-Chee Wan**, Rahmat Budiarto, “MPLS Assisted Handover in IP-Based Mobility Management Schemes: A Survey,” *Proceedings Second International Conference on Computer Research and Development (ICCRD 2010)*, Kuala Lumpur, Malaysia, May 7-10 2010, pp. 34-38. [[Link](#)]
- Bahareh Pahlevanzadeh, Imad J. Mohamad, **Tat-Chee Wan**, “Per-Priority Flow Control (PPFC) for Enhancing Metro Ethernet QoS,” *Proceedings Second International Conference on Computer Research and Development (ICCRD 2010)*, Kuala Lumpur, Malaysia, May 7-10 2010, pp. 83-87.
- Shaifizat Mansor, **Tat-Chee Wan**, “Mobility Management in Heterogeneous Wireless Access Network with IEEE 802.21 Services,” *Proceedings Second International Conference on Computer and Network Technology (ICCNT 2010)*, Bangkok, Thailand, Apr. 23-25 2010, pp. 110-114. [[Link](#)]

2009

- Shoa-Yei Yeong, **Tat-Chee Wan**, Wafaa Al-Salihy, “Combination of Neural Network Based Clustering and Genetic Algorithm for Multi-Objective 802.11n Planning,” *Proceedings 2009 IEEE 9th Malaysia International Conference on Communications (MICC 2009)*, Kuala Lumpur, Malaysia, Dec. 15-17 2009, pp. 852-856. [[Link](#)]
- Faisal Y. Alzyoud, Imad J. Mohamad, **Tat-Chee Wan**, “The Effect of Traffic Load on Using XCAST Based Routing Protocol in Wireless Ad Hoc Networks,” *Proceedings 7th International Conference on Information, Communications, and Signal Processing (ICICS 2009)*, Macau, China, Dec. 8-10, 2009. [[Link](#)]
- **Tat-Chee Wan**, Ahmed M. Manasrah, Omar Abouabdalla, Imad J. Mohamad, Anas F. Bayan, Hussein A. Al bazar, Adnan A. Hanif, “A New Dynamic-Auto-Static Technique for DHCPv4 IP Address Allocation,” *Proceedings 2009 IEEE International Conference on Antennas, Propagation and Systems (INAS 2009)*, Johor Baru, Malaysia, Dec. 3-5 2009.
- Imad J. Mohamad, **Tat-Chee Wan**, Faisal Y. Alzyoud, Putra Sumari, “Optimizing the MPLS

Support for Real Time IPv6-Flows using MPLS-PHS Approach,” *Proceedings IEEE TENCON 2009*, Singapore, Nov 23-26, 2009. [[Link](#)]

- Rafiza Ruslan, **Tat-Chee Wan**, “Cognitive Radio-based Power Adjustment for Wi-Fi,” *Proceedings IEEE TENCON 2009*, Singapore, Nov 23-26, 2009. pp. 2488-2492. [[Link](#)]
- Faisal Y. Alzyoud, **Tat-Chee Wan**, Imad J. Mohamad, “The Effect of Using XCAST Based Routing Protocol in Wireless Ad Hoc Networks,” *Proceedings IEEE TENCON 2009*, Singapore, Nov 23-26, 2009. [[Link](#)]
- Anas F. Bayan, **Tat-Chee Wan**, R. Sureswaran, “QoS and System Capacity Optimization in WiMAX Multi-hop Relay Using Flexible Tiered Control Technique,” *Proceedings of 2009 International Conference on Computer Engineering and Applications (ICCEA 2009)*, Manila, Philippines, June 6-8, 2009, pp 363 – 368.
- Seyed-Amin Hosseini-Seno, **Tat-Chee Wan**, Rahmat Budiarto, “Energy Efficient Cluster Based Routing Protocol for MANETs,” *Proceedings of 2009 International Conference on Computer Engineering and Applications (ICCEA 2009)*, Manila, Philippines, June 6-8, 2009, pp 435 – 439.
- S. A. Hosseini-Seno, B. Pahlevanzadeh, **T. C. Wan**, R. Budiarto, S. Ramadass, “Routing Layer Service Advertisement Approach for MANETs,” *Proceedings International Conference on Future Networks 2009 (ICFN 2009)*, Bangkok, Thailand, March 7-9, 2009, pp 249 – 253. [[Link](#)]

2008

- Seyed Amin Hosseini Seno, B. Pahlevanzadeh, **T. C. Wan**, R. Budiarto, “A Security Scheme for Cluster Based Mobile Ad hoc Networks,” *Proceedings 2nd International Conference on Science and Technology (ICSTIE 2008)*, Penang, Malaysia, December 12-13, 2008. [[PDF](#)]
- Bahareh Pahlevanzadeh, Seyed Amin Hosseini Seno, **Tat-Chee Wan**, Rahmat Budiarto, “A Comparative Study on the Development of Ethernet Flow Control,” *Proceedings 2nd International Conference on Science and Technology (ICSTIE 2008)*, Penang, Malaysia, December 12-13, 2008. [[PDF](#)]
- Rafiza Ruslan, **Tat-Chee Wan**, “Learning Ability in Cognitive Radio,” *Proceedings International Conference on Network Applications, Protocols and Services 2008 (NetApps 2008)*, Sintok, Malaysia, November 21 – 22, 2008. [[PDF](#)]
- B. Pahlevanzadeh, S.A. Hosseini Seno, **T. C. Wan**, R. Budiarto, Mohammed M. Kadhun, “A Cluster-Based Distributed Hierarchical IDS for MANETs,” *Proceedings International Conference on Network Applications, Protocols and Services 2008 (NetApps 2008)*, Sintok, Malaysia, November 21 – 22, 2008. [[PDF](#)]
- Manjur Kolhar, Anas F Bayan, **Tat Chee Wan**, Abouabdalla Omar and Sureswaran Ramadass, “Control and Media Sessions: IAX with RSW Control Criteria,” *Proceedings International Conference on Network Applications, Protocols and Services 2008 (NetApps 2008)*, Sintok, Malaysia, November 21 – 22, 2008. [[PDF](#)]
- Seyed-Amin Hosseini-Seno, B. Pahlevanzadeh, **T. C. Wan**, R. Budiarto, M. M. Kadhun, “A Distributed Resource-Management Approach in MANETs,” *Proceedings International Conference on Network Applications, Protocols and Services 2008 (NetApps 2008)*, Sintok, Malaysia, November 21 – 22, 2008. [[PDF](#)]
- Essam Natsheh, **Tat-Chee Wan**, “Links Lifetime Estimation Based on Nodes Affinity in Wireless Ad-hoc Networks,” *Proceedings 5th International Symposium on High Capacity Optical Networks & Enabling Technology 2008 (HONET 2008)*, Penang, Malaysia, November 18 - 20, 2008. [[Link](#)]
- Manjur S. Kolhar, **Tat Chee Wan**, O. Abouabdalla and R. Sureswaran, “Multimedia Communication: RSW Control Protocol and IAX,” *Proceedings 5th International Symposium on High Capacity Optical Networks & Enabling Technology 2008 (HONET 2008)*, Penang, Malaysia, November 18 - 20, 2008. [[Link](#)]
- Bahareh Pahlevanzadeh, Seyed Amin Hosseini Seno, **Tat-Chee Wan**, Rahmat Budiarto, “New Approach for Flow Control using PAUSE Frame Management,” *Proceedings International Conference on Distributed Frameworks and Applications (DFmA 2008)*, Penang, Malaysia, October 21 - 22, 2008, pp. 214 – 219. [[Link](#)]

- Bahareh Pahlevanzadeh, Seyed Amin Hosseini Seno, **Tat-Chee Wan**, Rahmat Budiarto, "A Survey on How to break Hash Functions," *Proceedings International Conference on Mathematics and Natural Sciences 2008 (ICMNS 2008)*, Bandung, Indonesia, October 28 - 30, 2008. [[PDF](#)]
- 2007
- Way-Chuang Ang, Chee-HongTeh, **Tat-Chee Wan**, Rahmat Budiarto, "Performance Evaluation of Unidirectional Lightweight Encapsulation using ns-2 and DVB-S Testbed," *Proceedings 2007 IEEE Int'l Conference on Telecommunications and Malaysia Int'l Conference on Communications, ICT-MICC 2007*, Penang, Malaysia, May 14-17, 2007, pp. 483-488. [[Link](#)]
 - Seyed Amin Hosseini Seno, **Tat-Chee Wan**, Rahmat Budiarto, "Hybrid Hierarchical Approach for Addressing Service Discovery Issues in MANETs," *Proceedings 2007 IEEE Int'l Conference on Telecommunications and Malaysia Int'l Conference on Communications, ICT-MICC 2007*, Penang, Malaysia, May 14-17, 2007, pp. 197-202. [[Link](#)]
- 2006
- Sayid Mohamed Abdule, **Wan Tat Chee**, Ahmed Mustafa, Aisha Hassan, "An Efficient Scheme to Increase the Throughput of VoIP Traffic over Satellite while Reducing Bandwidth Utilization," *Proceedings International Conference on ICT for the Muslim World, ICT4M 2006*, Kuala Lumpur, Malaysia, Nov 21-23, 2006. [[PDF](#)]
 - Wilson T.H. Woon, **T. C. Wan**, "Performance Evaluation of IEEE 802.15.4 Ad Hoc Wireless Sensor Networks: Simulation Approach," *Proceedings 2006 IEEE International Conference on Systems, Man, and Cybernetics, SMC 2006*, Taipei, Taiwan, Oct 8-11, 2006, pp. 1443-1448. [[Link](#)]
 - Sayid Mohamed Abdule, **Wan Tat Chee**, Ahmed Mustaf, Aisha Hassan Abdalla, "Evaluation of an Efficient Approach to provide QoS to VoIP," *Proceedings 2nd Information and Communication Technology Seminar, ICTS 2006*, Surabaya, Indonesia, Aug 29, 2006. [[PDF](#)]
 - Way-Chuang Ang, Nurul Azila binti Yusri, Chen-Wei Tan, **Tat-Chee Wan**, "Implementation of IP Mesh Networks using ULE Protocol over DVB-S Links," *Proceedings Int'l Conference on Computing and Informatics, ICOCI 2006*, Kuala Lumpur, Malaysia, Jun 6-8, 2006. [[PDF \(with minor corrections\)](#)]
 - Mohammed Saghir, **Tat-Chee Wan**, Rahmat Budiarto, "QoS Multicast Routing Based on Bandwidth Estimation in Mobile Ad Hoc Networks," *Proceedings Int'l Conference on Computer and Communication Engineering, ICCCE '06*, Kuala Lumpur, Malaysia, May 9-11, 2006. [[PDF](#)]
- 2005
- Teh Chee Hong, **Wan Tat Chee**, Rahmat Budiarto, "A Comparison of IP Datagrams Transmission using MPE and ULE over Mpeg-2/DVB Networks," *Proceedings Fifth Int'l Conference on Information, Communications, and Signal Processing (ICICS 2005)*, Bangkok, Thailand, Dec. 6-9, 2005, pp. 1173-1177. *Published Paper* [[Link](#)] *Corrected Paper (Revised Graph IV)* [[PDF](#)]
 - Mohammed Saghir, **Tat Chee Wan**, Rahmat Budiarto, "Multicast Routing with Quality of Service in Mobile Ad hoc Networks," *Proceedings National Computer Science Postgraduate Colloquium 2005 (NaCSPC '05)*, USM, Penang, Malaysia, Jun. 27-28, 2005. [[PDF](#)]
 - Foo Kong Yong, **Wan Tat Chee**, Sureswaran Ramadass, "M-SCTP: Transport Layer Multicasting Protocol," *Proceedings National Computer Science Postgraduate Colloquium 2005 (NaCSPC '05)*, USM, Penang, Malaysia, Jun. 27-28, 2005. [[PDF](#)]
 - Teh Chee Hong, **Wan Tat Chee**, Rahmat Budiarto, "Simulation and Design of IP over DVB using Multi-Protocol Encapsulation and Ultra Lightweight Encapsulation," *Proceedings National Computer Science Postgraduate Colloquium 2005 (NaCSPC '05)*, USM, Penang, Malaysia, Jun. 27-28, 2005. [[PDF](#)]
- 2004
- Teh Chee Hong, **Wan Tat Chee**, Rahmat Budiarto, "Experiences with the NS Simulator," *Proceedings NS-2 Network Simulation Workshop 2004*, ITMA, UPM Serdang, Malaysia,

Nov. 26, 2004. [[PDF](#)]

- **Tat-Chee Wan**, R. K. Subramanian, “Implementing QoS Support for Wireless Multicast Nodes,” *Proceedings Int’l Conference on Communications 2004 (ICC 2004)*, Paris, France, Jun. 20-24, 2004, pp. 3974-3978 Vol. 7. [[Link](#)]

2003

- Ho Yew Leong, **Wan Tat Chee**, “Wireless Real Time Monitoring,” *Poster Presentation at IPTA Research & Development Exposition 2003*, Kuala Lumpur, Malaysia, Oct. 9-12, 2003. [[PDF](#)]
- Chen-Wei Tan, **Tat-Chee Wan**, Rahmat Budiarto, “Deployment of UDL Mesh Satellite Networks using DVB-S Technology,” *Proceedings 9th Asia Pacific Conference on Communications 2003 (APCC 2003)*, Penang, Malaysia, Sep. 21-24, 2003, pp. 873-877 Vol. 3. [[Link](#)]

2001

- **Tat Chee Wan**, Swee Keong Joo, “Random Early Drop with In & Out (RIO) for Asymmetrical Geostationary Satellite Links,” *Proceedings Joint Int’l Conference MICC, LiSLO & ISCE 2001*, Kuala Lumpur, Malaysia, Oct. 22-24, 2001. *Paper* [[PDF](#)] *Presentation* [[PDF](#)]
- Chin Hooi Tang, **Tat Chee Wan**, “Performance of Multicast Traffic Coordinator Framework for Bandwidth Management of Real-Time Multimedia over Intranets,” *Proceedings Joint Int’l Conference MICC, LiSLO & ISCE 2001*, Kuala Lumpur, Malaysia, Oct. 22-24, 2001. *Paper* [[PDF](#)] *Presentation* [[Powerpoint](#)]

2000

- Chin Hooi Tang, **Tat Chee Wan**, “Multicast Traffic Coordinator Framework for Real-Time Multimedia over Residential Networks,” *Proceedings International Symposium on Consumer Electronics (ISCE 2000)*, City Univ. of Hong Kong, Hong Kong, Dec. 5-7, 2000. *Paper* [[Link](#)] [[Web Proceedings](#)]
- Swee Keong Joo, **Tat Chee Wan**, “Incorporation of QoS and Mitigated TCP/IP over Satellite Links” *Proceedings 1st Asian Int’l Mobile Computing Conference (AMOC 2000)*, Penang, Malaysia, Nov. 1-3, 2000. *Paper* [[PDF](#)] *Presentation* [[Powerpoint](#)]
- **Tat Chee Wan**, “The Future of Mobile Services: Consumer or Market Driven?” *Forum Presentation* [[Powerpoint](#)], *1st Asian Int’l Mobile Computing Conference (AMOC 2000)*, Penang, Malaysia, Nov. 1-3, 2000.
- **Tat Chee Wan**, Alvin Goh, Chin Keong Ng, Geong Sen Poh, “Integrating Public Key Cryptography into the Simple Network Management Protocol (SNMP) Framework” *Proceedings IEEE TENCON 2000*, Kuala Lumpur, Malaysia, Sep. 25-27, 2000, pp. 271 - 276 Vol. 3. *Paper* [[Link](#)]
- **Tat Chee Wan**, “Interactive Wide Area Collaboration via Unidirectional Links” *Proceedings APAN Conf. 2000*, Beijing, P.R. China, Aug. 22-25, 2000. *Paper* [[PDF](#)] *Presentation* [[Powerpoint](#)]
- Swee Keong Joo, **Tat Chee Wan**, “Quality of Service (QoS) Issues over Satellite Links” *Proceedings APAN Conf. 2000*, Beijing, P.R. China, Aug. 22-25, 2000. *Paper* [[PDF](#)]

1999

- **Tat Chee Wan**, Chee Hoong Leong, Ronnie Chee Weng Thum, “Multicast Firewall for Intranet Multimedia Applications,” *Proceedings WEC '99*, Subang, Kuala Lumpur, Malaysia, Jul. 19-22, 1999. *Paper* [[PDF](#)] *Presentation* [[PDF](#)]

1998

- **Tat Chee Wan**, R. Sureswaran, K. Saravanan, “Multiple LAN Internet Protocol Converter (MLIC) for Multimedia Conferencing,” *Proceedings ICIMU '98*, UNITEN, Kajang, Selangor, Malaysia, Sept. 28-30, 1998. [[PDF](#)]
- **Tat Chee Wan**, R. Sureswaran, K. Saravanan, “Multiple LAN Internet Protocol Converter (MLIC) for Multimedia Conferencing,” *Proceedings SEACOMM '98*, Penang, Malaysia, Aug. 12-14, 1998. *Paper* [[PDF](#)] *Presentation* [[PDF](#)]

1997

- **Tat Chee Wan**, Interface Bus Protocol for controlling multiple slave devices, *Internal Technical Report*, Motorola Malaysia Sdn. Bhd., Penang, Malaysia.
- **Tat Chee Wan**, Design and Implementation of a Simple Taxi-Dispatch Protocol for Two-way Mobile Radios, *Internal Technical Report*, Motorola Malaysia Sdn. Bhd., Penang, Malaysia.
- **Tat Chee Wan**, Ergonomics Specification for a Simple Taxi-Dispatch Protocol for Two-way Mobile Radios, *Internal Technical Report*, Motorola Malaysia Sdn. Bhd., Penang, Malaysia.

1996

- **Tat Chee Wan**, Protocol Design and Implementation for Korean Kani Pseudo-Trunking Two-way Radio, *Internal Technical Report*, Motorola Malaysia Sdn. Bhd., Penang, Malaysia.
- **Tat Chee Wan**, Scan Engine for Multiple Scan Algorithms, *Internal Technical Report*, Motorola Malaysia Sdn. Bhd., Penang, Malaysia.
- **Tat Chee Wan** A Modular Software Framework for Two-way Radio Control, *Internal Technical Report*, Motorola Malaysia Sdn. Bhd., Penang, Malaysia.
- **Tat Chee Wan**, An Embedded Microkernel Operating System with Message Queue Synchronization Primitives for Two-way Radios, *Internal Technical Report*, Motorola Malaysia Sdn. Bhd., Penang, Malaysia.

1995

- **Tat Chee Wan**, Efficient Co-design Technique for LCD Displays, *Internal Technical Report*, Motorola Malaysia Sdn. Bhd., Penang, Malaysia.

1994

- **Tat Chee Wan**, Mansur Kabuka, “Edge Preserving Image Compression for Magnetic Resonance Images Using Dynamic Associative Neural Networks (DANN)-based Neural Networks,” *Proc. SPIE Vol. 2164: Medical Imaging 1994: Image Capture, Formatting and Display*, May 1994, pp. 500-511. [[Link](#)]

1992

- **Tat Chee Wan**, Mansur Kabuka, “Manufacturing Automation Protocol and Local Area Networks for Multiple Mobile Robot System,” *Proc. Rensselaer’s Third Int’l Conf. on Computer Integrated Manufacturing*, Troy, NY, May 20-22, 1992. [[Link](#)]

Note: Actual Titles of Internal Technical Reports for Motorola Malaysia Sdn. Bhd. changed to protect Company Proprietary Information under non-disclosure.

Supervision

[top](#)

Doctor of Philosophy

1. *Quality of Service Enabled Cross-Layer Multicast Framework for Mobile Ad Hoc Networks*, Mohammed Mohammed Saghir Omar [co-supervised with Assoc. Prof. Rahmat Budiarto]: PhD. Comp. Sci. — Feb. 2008.
2. *Hierarchical Framework For Energy-Efficient And Secure Resource Management In Mobile Ad Hoc Networks*, Syed Amin Hosseini Seno [co-supervised with Assoc. Prof. Rahmat Budiarto]: PhD. Comp. Sci. — Jan. 2010.
3. *An Optimized Framework for Header Suppression of Real Time IPv6 Traffic in MultiProtocol Label Switching (MPLS) Networks*, Imad Jasim Mohammed: PhD. Adv. Comp. Networks — Aug. 2011.
4. *XCAST Based Routing Protocol For Push To Talk Application in Mobile Ad Hoc Networks*, Faisal Yousef Abed-Alrahman Alzyoud: PhD. Comp. Sci. — Dec. 2011.
5. *Dynamic Evolving Neural Fuzzy Framework for Phishing E-mail Detection*,

Ammar Ali Deeb Almomani: PhD. Adv. Comp. Networks — Mar. 2013.

6. *A Performance Evaluation and Enhancement Scheme for Network-Based Inter-Domain IP Handover in Mobile Networks*,
Alireza Taghizadeh: PhD. Comp. Sci. — Mar. 2013.
7. *Enhanced Network Connectivity And Node Lifetime Techniques in Wireless Sensor Networks*,
Ali Shanon Aiyal Al-Saidi: PhD. Adv. Comp. Networks — May 2013.
8. *Layered Botnet Detection Framework Based on Signal Processing and Discrete Time Analysis*,
Loai Kayed Hassan Bani Melhim: PhD. Adv. Comp. Networks — July 2013.
9. *Per-Priority Flow Control (PPFC) Framework for Enhancing QoS in Metro Ethernet*,
Bahareh Pahlevanzadeh: PhD. Comp. Sci. — Nov. 2013.
10. *Optimized Multipath Quality of Service Routing Protocol Using Partitioning Approach For Wireless Sensor Networks*,
Mohammed Zaki Hasan: PhD. Comp. Sci. — Jan. 2014.
11. *Performance Evaluation of a New Uplink Scheduling Architecture for WiMAX Multi-Hop Relay Networks*,
Anas Fouad Hossein Bayan: PhD. Adv. Comp. Networks — Dec. 2014.
12. *Development of Energy-Balanced Node Deployment Strategies to Reduce Energy Hole Problem in Wireless Sensor Networks*,
Hadi Asharioun: PhD. Adv. Comp. Networks — Jan. 2015.

Masters of Science (Research)

1. *Design of Point to Multipoint Satellite Based Networking Protocol using IP over DVB-S*,
Tan Chen Wei: MSc Comp. Sci. (Research) — Dec. 2005.
2. *Distributed Time Division Multiple Access (DTDMA) Medium Access Control Protocol for Wireless Sensor Networks*,
Woon Thean Hung Wilson: MSc Comp. Sci. (Research) — Dec. 2006.
3. *An Investigation on an Efficient Approach of Improving Quality of Service of VoIP over Satellite*,
Sayid Mohamed Abdule: MSc Comp. Sci. (Research) — June 2007.
4. *ULE Robust Header Compression for IP-Based Communications over Digital Video Broadcast-Satellite (DVB-S)*,
Teh Chee Hong: MSc Comp. Sci. (Research) — Aug. 2007.
5. *Ad Hoc Wireless Routing With Density Based Probabilistic Algorithm For Mobile Wireless Networks With Non-Uniform Node Distribution*,
Ong Hean Loong: MSc Comp. Sci. (Research) – Aug. 2010.
6. *Performance Characterization of Robust Header Compression (RoHC) Over Satellite Based Unidirectional Link (UDL)*,
Ang Way Chuang: MSc Comp. Sci. (Research) – Mar. 2011.
7. *SEAMSAR: Seamless and Secure Handover Model for Mobile IPTV Using MIPv6*,
Amanda Caesario Cornelis [co-supervised with Assoc. Prof. Rahmat Budiarto]: MSc. Comp. Sci. (Research) — July 2011.
8. *Heuristic Based Planning Approach for Improving Wireless Network Coverage of Multi-Storey Building*,
Yeong Shoa Yei: MSc. Adv. Comp. Networks (Research) — Aug. 2011.
9. *Header Compression Schemes Over Hybrid Satellite-WiMAX Networks*,
Chong Yung Wey: MSc. Adv. Comp. Networks (Research) — Feb. 2012.
10. *Enhanced GANG Algorithm For Enhanced Mobile Lightweight Medium Access Control Protocol For Multi-Hop Wireless Sensor Network*,
Amina Ahmed Mohamed: MSc. Comp. Sci. (Research) — June 2014.

Masters of Science (Mixed Mode)

1. *Robust Header Compression for RTP Header in a RTP Profile over Ethernet*,

- Mihir J. Mehta: MSc Comp. Sci. (Mixed Mode) — June 2009.
2. *Low Delay Medium Access Control Protocol for Wireless Sensor Networks*,
Quan XiangYu: MSc Comp. Sci. (Mixed Mode) — June 2009.
 3. *EML-MAC: A Simplified Time Slot Synchronization Algorithm for Wireless Sensor Networks*,
Ehsan Tabatabaei Yazdi: MSc Comp. Sci. (Mixed Mode) — January 2010.
 4. *Enhancement of WiFi Indoor Positioning System*,
Ahed Hussein Aboodi: MSc Comp. Sci. (Mixed Mode) — June 2011.
 5. *EPID: Enhanced 1-Persistence Data Dissemination Protocol for Vehicular Ad Hoc Networks in Highway Environments*,
Fahimeh Rostami: MSc Comp. Sci. (Mixed Mode) — August 2012.
 6. *An Experimental Methodology For Evaluation of Multi-Hop Medium Access Control Protocols Of Wireless Sensor Networks*,
Mohammad Ali Sarvghadi: MSc Comp. Sci. (Mixed Mode) — August 2012.

Masters of Science in IT Technopreneurship

1. *MeshNet: Application of MeshNet & iLearnDB for Satellite Telecommunication Channels in Remote Areas*,
Shamsuri Chik: MSc IT Technopreneurship — Nov. 2009.
2. *MeshNet: An Impact of Service Quality Factors on Customer Satisfaction*,
Hazrieffendy Bakri: Msc IT Technopreneurship — Nov. 2009.

Grants

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International Level

1. “Supporting European Union and Southeast Asia ICT Strategic Partnership and Policy Dialogue: Connecting ICT EU-SEA Research Development and Innovation Knowledge Network (CONNECT2SEA),” European Union FP7 Support Action Grant (principal researcher for USM). Dec 2013 — May 2016 (expected).

National Level

2. “Intelligent Network Monitoring System (NetMON),” IRPA Long Term Grant (co-researcher). Sept 1999 — July 2002.
3. “Multicasting IPv6 and Reliable Multimedia Conferencing over Satellite,” IRPA Long Term Grant (co-researcher). Jan 2000 — July 2003.
4. “An Investigation Into Adaptive Digital Signal Processing for Wireless Communication: Modeling and Analysis of Algorithms,” IRPA Long Term Grant (co-researcher). Oct 2000 — Sept 2003.
5. “Development of ICT Infrastructure Platform for Network Monitoring — Wireless Monitoring,” IRPA PR (Top Down) Grant (principal researcher). Apr 2002 — June 2004.
6. “Investigation of Satellite-Based Unidirectional Link for Wide Area Collaboration,” IRPA EA Grant (principal researcher). Sept 2002 — Dec 2004.
7. “Improving Performance of Unidirectional Link (UDL) Mesh Network via Header Compression Scheme,” MOSTI eScience Grant (principal researcher). Dec 2006 — Dec 2008.

University Level

1. “Characterization of ATM Networks for Wireless Environment,” IRPA Short Term Grant (principal researcher). Jan 1998 — Nov 1999.
2. “Investigation of Weather Effects on Performance of Satellite Communications,” IRPA Short Term Grant (co-researcher). Jul 1998 — Jan 2000.
3. “SurvNet (Surveillance System over the Internet),” IRPA Short Term Grant (co-researcher). Dec 1999 — Nov 2000.

4. "Software Development Environment for PESONA 16 Microprocessor," IRPA Short Term Grant (principal researcher). Sept 2000 — Dec 2002.
5. "Background Study on IPv6 over Ad Hoc Wireless ," IRPA Short Term Grant (principal researcher). Sept 2005 — Sept 2006.
6. "Performance Study on Mobile Ad Hoc Networks Routing Protocols in Heterogeneous Density Environment," USM Short Term Grant (principal researcher). Sept 2008 — Oct 2010.
7. "QoS Provisioning and Bandwidth Allocation in WiMAX Mesh Multi-hop Relay Networks," USM Short Term Grant (principal researcher). Sep 2009 – Sep 2011.
8. "Fast and Scalable Network-Controlled Handover Between All-IP 3GPP LTE/SAE and Mobile WiMAX Networks," USM Research University Individual Project Grant (principal researcher). Aug 2010 – Jul 2014.
9. "Modeling of SVC for Variable Bit Rate Video Transmission in Wireless Sensor Network," USM Research University Individual Project Grant (principal researcher). Jul 2012 – Jul 2015 (expected).
10. "Improvement of Cluster Lifetime for Wireless Sensor Networks," USM Short Term Research Grant (principal researcher). Oct 2012 – Oct 2014.

Honors and Societies

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Awards

- Malaysia Technology Expo 2006 (MTE 2006) Invention/Innovation Competition: *Bronze Medal (Project Leader, Unidirectional Link Mesh Network over DVB-S)*
- 19th International Invention, Innovation & Technology Exhibition (ITEX 2008): *Silver Medal (Project Co-Researcher, REDMUG – Video On Demand)*
- Korea Invention Promotion Association 2008 (KIPA 2008): *Silver Medal (Project Co-Researcher, jPortable)*
- Malaysia Technology Expo 2009 (MTE 2009) Invention/Innovation Competition: *Silver Medal (Project Leader, Bandwidth Efficient Satellite Feed and Receiver Gateway)*
- Malaysia Technology Expo 2010 (MTE 2010) Invention/Innovation Competition: *Bronze Medal (Project Co-Researcher, Wi3D Planning Tool)*

Professional

Graduate Member: The Institution of Engineers, Malaysia (IEM)

Member: Institute of Electrical and Electronic Engineers Communications Society (IEEE Comsoc)

Member: Institute of Electrical and Electronic Engineers (IEEE)

Member: Institute of Electronics, Information and Communication Engineers (IEICE)

Academic

Member: Eta Kappa Nu Electrical Engineering Honorary Society

Member: Tau Beta Pi Engineering Honorary Society

Member: Phi Kappa Phi Academic Honorary Society

Award: College of Engineering Award, Univ. of Miami, FL, USA

Award: Electrical and Computer Engineering Departmental Award, Univ. of Miami, FL, USA

Scholarship: Isaac B. Singer Full Tuition Undergrad. Scholarship, Univ. of Miami, FL, USA