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		Updated:	April 12, 2012

Research Interests

Spatial and spatio-temporal databases, location-based services, mobile computing, wireless sensor networks, vehicular networks, and data privacy.

Education

2010	Doctor of Philosophy (Major: Computer Science) Department of Computer Science and Engineering, University of Minnesota - Twin Cities Thesis: Privacy-Preserving Location-based Services
2008	Master of Science (Major: Computer Science) Department of Computer Science and Engineering, University of Minnesota - Twin Cities
2005	Master of Philosophy (Major: Computer Science) Department of Computing, The Hong Kong Polytechnic University Thesis: Peer-to-Peer Cooperative Caching in Mobile Environments (COCA)
2002	Bachelor of Arts (Hons) with First Class Honors (Major: Computer Science) Department of Computing, The Hong Kong Polytechnic University Final year project: Wireless Online Tutoring System (WOTS)

Work Experience

08/2010 - Present	Assistant Professor Department of Computer Science, City University of Hong Kong
08/2005 - 06/2010	Research Assistant Department of Computer Science and Engineering, University of Minnesota - Twin Cities
05/2008 - 07/2008	Research Intern IBM Thomas J. Watson Research Center, Hawthorne, NY, USA
09/2004 - 08/2005	Research Assistant/Associate Department of Computing, The Hong Kong Polytechnic University
08/2000 - 07/2001	Web Developer (Student Intern) asiabondportal.com (HK) Limited

A. Editorship

1. **Proceedings of the 2011 12th IEEE International Conference on Mobile Data Management (MDM 2011).**
Arkady Zaslavsky, Panos K. Chrysanthis, Dik Lun Lee, Dipanjan Chakraborty, Vana Kalogeraki, Mohamed F. Mokbel, and Chi-Yin Chow.
IEEE Computer Society, USA, 342 pages (Volume 1) and 105 pages (Volume 2), ISBN: 978-0-7695-4436-6, June 2011.

B. Journal Papers

2. **On Efficient and Scalable Support of Continuous Queries in Mobile Peer-to-Peer Environments.**
Chi-Yin Chow, Mohamed F. Mokbel, and Hong Va Leong.
IEEE Transactions on Mobile Computing (IEEE TMC), Vol. 10, No. 10, pages 1473-1487, October 2011.
3. **Query-Aware Location Anonymization for Road Networks.**
Chi-Yin Chow, Mohamed F. Mokbel, Jie Bao, and Xuan Liu.
GeoInformatica, Springer, Vol. 15, No. 3, pages 571-607, July 2011.
4. **Trajectory Privacy in Location-based Services and Data Publication**
Chi-Yin Chow and Mohamed F. Mokbel.
ACM SIGKDD Explorations, Special Issue: Privacy in Mobility Data Mining, Vol. 13, No. 1, pages 19-29, July 2011. (Invited)
5. **Spatial Cloaking for Anonymous Location-based Services in Mobile Peer-to-Peer Environments.**
Chi-Yin Chow, Mohamed F. Mokbel, and Xuan Liu.
GeoInformatica, Springer, Vol. 15, No. 2, pages 351-380, April 2011.
6. **A Privacy-Preserving Location Monitoring System for Wireless Sensor Networks.**
Chi-Yin Chow, Mohamed F. Mokbel, and Tian He.
IEEE Transactions on Mobile Computing (IEEE TMC), Vol. 10, No. 1, pages 94-107, January 2011.
7. **Casper*: Query Processing for Location Services without Compromising Privacy.**
Chi-Yin Chow, Mohamed F. Mokbel, and Walid G. Aref.
ACM Transactions on Database Systems (ACM TODS), Vol. 34, No. 4, pages 24:1-24:48, December 2009.
8. **Scalable Processing of Snapshot and Continuous Nearest-Neighbor Queries over One-Dimensional Uncertain Data.**
Jinchuan Chen, Reynold Cheng, Mohamed F. Mokbel, and Chi-Yin Chow.
The International Journal on Very Large Data Bases (VLDB Journal): Special Issue on Uncertain and Probabilistic Databases, Vol. 18, No. 5, pages 1219-1240, October 2009.
9. **Privacy in Location-based Services: A System Architecture Perspective.**
Chi-Yin Chow and Mohamed F. Mokbel.
The SIGSPATIAL Special: Letters on Privacy in Location-based Services, Vol. 1, No. 2, pages 23-27, July 2009. (Invited)
10. **GroCoca: Group-based Peer-to-Peer Cooperative Caching in Mobile Environment.**
Chi-Yin Chow, Hong Va Leong, and Alvin T. S. Chan.
The IEEE Journal on Selected Areas in Communications (J-SAC): Special Issue on Peer-to-Peer Communications and Applications, Vol. 25, No. 1, pages 179-191, January 2007.

11. **Utilizing the Cache Space of Low-Activity Clients in a Mobile Cooperative Caching Environment.**
Chi-Yin Chow, Hong Va Leong, and Alvin T. S. Chan.
Accepted by *The International Journal of Wireless and Mobile Computing (IJWMC): Special Issue on Mobile Distributed Computing*, To appear.
12. **Supporting Real-time Collaborative Learning with Web-based Groupware.**
Stephen C. F. Chan, Cane W. K. Leung, Cassidy Y. Yeung, Teddy C. Y. Chow, Edward W. C. Tsui, and Vincent T. Y. Ng.
The Journal of Innovations in Education and Teaching International (IETI), vol. 42, No. 4, pages 349-362, Routledge, Taylor & Francis Group, November 2005.

C. Conference/Workshop Papers

13. **Dash: A Novel Search Engines for Database-Generated Dynamic Web Pages.**
Ken Lee, Kanchan Bankar, Baihua Zheng, Chi-Yin Chow, and Honggang Wang.
The 32nd IEEE International Conference on Distributed Computing Systems (**ICDCS 2012**), Macau, China.
14. **GeoFeed: A Location-Aware News Feed System.**
Jie Bao, Mohamed F. Mokbel, and Chi-Yin Chow.
The 28th IEEE International Conference on Data Engineering (**ICDE 2012**), Washington, DC, USA.
15. **Efficient Evaluation of k-NN Queries Using Spatial Mashups.**
Detian Zhang, Chi-Yin Chow, Qing Li, Xinming Zhang, and Yinlong Xu.
To appear in *Proceedings of the 12th International Symposium on Spatial and Temporal Databases (SSTD 2011)*, Minneapolis, MN, USA.
16. **Towards Location-based Social Networking Services. (Best Paper Candidate)**
Chi-Yin Chow, Jie Bao, and Mohamed F. Mokbel.
In *Proceedings of the 2nd ACM SIGSPATIAL International Workshop on Location Based Social Networks (LBSN 2010)*, pages 31-38, San Jose, CA, USA.
17. **Efficient Evaluation of k-Range Nearest Neighbor Queries in Road Networks.**
Jie Bao, Chi-Yin Chow, Mohamed F. Mokbel, and Wei-Shinn Ku.
In *Proceedings of the 11th International Conference on Mobile Data Management (MDM 2010)*, pages 115-124, Kanas City, MO, USA.
18. **Aggregate Location Monitoring for Wireless Sensor Networks: A Histogram-based Approach. (Best Paper Award)**
Chi-Yin Chow, Mohamed F. Mokbel, and Tian He.
In *Proceedings of the 10th International Conference on Mobile Data Management (MDM 2009)*, pages 82-91, Taipei, Taiwan.
19. **Evaluation of Range Nearest-Neighbor Queries with Quality Guarantee.**
Chi-Yin Chow, Mohamed F. Mokbel, Joe Nap, and Suman Nath.
In *Proceedings of the 11th International Symposium on Spatial and Temporal Databases (SSTD 2009)*, pages 283-301, Aalborg, Denmark.
20. **Probabilistic Verifiers: Evaluating Constrained Nearest-Neighbor Queries over Uncertain Data.**
Reynold Cheng, Jinchuan Chen, Mohamed F. Mokbel, and Chi-Yin Chow.
In *Proceedings of the 24th IEEE International Conference on Data Engineering (ICDE 2008)*, pages 973-982, Cancun, Mexico.
21. **Enabling Private Continuous Queries for Revealed User Locations.**
Chi-Yin Chow and Mohamed F. Mokbel.
In *Proceedings of the 10th International Symposium on Spatial and Temporal Databases (SSTD 2007)*, pages 258-275, Boston, MA, USA.

22. **Hybrid Cooperative Caching in a Mobile Environment.**
 Hong Va Leong and Chi-Yin Chow.
 In *Proceedings of the 1st International Conference on Ubiquitous Information Management and Communication (ICUIMC 2007)*, Suwon, Korea.
23. **The New Casper: Query Processing for Location Services without Compromising Privacy.**
 Mohamed F. Mokbel, Chi-Yin Chow, and Walid G. Aref.
 In *Proceedings of the 8th Annual CERIAS Information Security Symposium (2007)*, West Lafayette, IN, USA.
 (Invited Poster)
24. **The New Casper: Query Processing for Location Services without Compromising Privacy.**
 Mohamed F. Mokbel, Chi-Yin Chow, and Walid G. Aref.
 In *Proceedings of the 32nd International Conference on Very Large Data Bases (VLDB 2006)*, pages 763-774,
 Seoul, Korea.
25. **A Peer-to-Peer Spatial Cloaking Algorithm for Anonymous Location-based Services.**
Chi-Yin Chow, Mohamed Mokbel, and Xuan Liu.
 In *Proceedings of the 14th ACM International Symposium on Advances in Geographic Information Systems (ACM-GIS 2006)*, pages 171-178, Arlington, VA, USA.
26. **Challenges in Preserving Location Privacy in Peer-to-Peer Environments.**
 Mohamed F. Mokbel and Chi-Yin Chow.
 In *Proceedings of the International Workshop on Information Processing over Evolving Networks (WINPEN 2006)*, in conjunction with the 7th International Conference on Web Age Information Management (WAIM),
 Hong Kong. (Invited)
27. **Distributed Group-based Cooperative Caching in a Mobile Broadcast Environment.**
Chi-Yin Chow, Hong Va Leong, and Alvin T. S. Chan.
 In *Proceedings of the 6th International Conference on Mobile Data Management (MDM 2005)*, pages 97-106,
 Ayia Napa, Cyprus.
28. **Group-based Cooperative Cache Management for Mobile Clients in a Mobile Environment.**
Chi-Yin Chow, Hong Va Leong, and Alvin T. S. Chan.
 In *Proceedings of the 33rd International Conference on Parallel Processing (ICPP 2004)*, pages 83-90, Mon-
 treal, Canada.
29. **Peer-to-Peer Cooperative Caching in a Hybrid Data Delivery Environment.**
Chi-Yin Chow, Hong Va Leong, and Alvin T. S. Chan.
 In *Proceedings of the 7th International Symposium on Parallel Architectures, Algorithms, and Networks (ISPAN 2004)*, pages 79-84, Hong Kong.
30. **Cache Signatures for Peer-to-Peer Cooperative Caching in Mobile Environments.**
Chi-Yin Chow, Hong Va Leong, and Alvin T. S. Chan.
 In *Proceedings of the 18th IEEE International Conference on Advanced Information Networking and Appli-
 cations (AINA 2004)*, pages 96-101, Fukuoka, Japan.
31. **Peer-to-Peer Cooperative Caching in Mobile Environments.**
Chi-Yin Chow, Hong Va Leong, and Alvin T. S. Chan.
 In *Proceedings of the 2nd IEEE International Workshop on Mobile Distributed Computing (MDC 2004)*, in
 conjunction with the 24th IEEE International Conference on Distributed Computing Systems (ICDCS), pages
 528-533, Tokyo, Japan.
32. **Wireless Online Tutoring System (WOTS) With Collaborative Diagramming.**
 Teddy C. Y. Chow, Edward W. C. Tsui, Stephen C. F. Chan, and Vincent T. Y. Ng.
 In *Proceedings of the 2nd IEEE International Conference on Advanced Learning Technologies (ICALT*

2002), pages 254-258, Kazan, Tatarstan, Russia.

D. Demonstration Papers

33. **TinyCasper: A Privacy-Preserving Aggregate Location Monitoring System in Wireless Sensor Networks.**

Chi-Yin Chow, Mohamed F. Mokbel, and Tian He.

In *Proceedings of the ACM International Conference on Management of Data (SIGMOD 2008)*, pages 1307-1310, Vancouver, BC, Canada.

34. **The New Casper: A Privacy-Aware Location-Based Database Server.**

Mohamed F. Mokbel, Chi-Yin Chow, and Walid G. Aref.

In *Proc. of the 23rd IEEE International Conference on Data Engineering (ICDE 2007)*, pages 1499-1500, Istanbul, Turkey.

E. Book Chapters

35. **Privacy of Spatial Trajectories.**

Chi-Yin Chow and Mohamed F. Mokbel.

Computing with Spatial Trajectories, Edited by Yu Zheng and Xiaofang Zhou, Springer, 2011, ISBN 978-1-4614-1628-9. (Invited)

36. **Spatial Cloaking Algorithms for Location Privacy.**

Chi-Yin Chow.

Encyclopedia of Geographical Information Science, Edited by Shashi Shekhar and Hui Xiong, Springer, USA, 2008, ISBN 978-0-387-30858-6.

37. **Peer-to-Peer Cooperative Caching in Mobile Environments.**

Chi-Yin Chow, Hong Va Leong, and Alvin T. S. Chan.

Encyclopedia of Mobile Computing & Commerce, Edited by David Taniar, Idea Group Reference, USA, April 2007, ISBN 978-1-5990-4002-8.

Professional Activities

A. Conference/Workshop Organization

1. Proceedings Chair - The 12th IEEE International Conference on Mobile Data Management (MDM 2011)
2. Proceedings Chair - The 8th International Workshop on Data Management for Sensor Networks (DMSN 2011), in conjunction with VLDB
3. Web Chair - The 1st International Workshop on Privacy-Aware Location-based Mobile Services (PALMS 2007), in conjunction with MDM.

B. Editorial Board

1. International Journal of Information Processing and Management (IJIPM), Advanced Institute of Convergence IT (AICIT), Korean. (05/2011 - Present)

C. Conference/Workshop Program Committee

1. IEEE International Conference on Mobile Data Management (IEEE MDM 2012)
2. IEEE International Conference on Parallel and Distributed Systems - Mobile, Sensor and Ubiquitous Computing Track (IEEE ICPADS 2012)

3. ACM International Workshop on Data Engineering for Wireless and Mobile Access, in conjunction with SIGMOD/PODS (ACM MobiDE 2012)
4. IEEE International Conference on Advanced Information Networking and Applications - Mobile Networks and Applications Track (IEEE AINA 2012)
5. ACM International Symposium on Applied Computing - Mobile Computing and Applications Track (ACM SAC 2012)
6. IEEE International Symposium on Parallel and Distributed Processing with Applications - Database, Data Mining and Data Management Track (IEEE ISPA 2012)
7. IFIP International Conference on Network and Parallel Computing (IFIP NPC 2012)
8. IARIA International Conference on Advanced Geographic Information Systems, Applications, and Services (IARIA GEOProcessing 2012)
9. International Conference on Informatics, Electronics and Vision (ICIEV 2012)
10. ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2011)
11. ACM SIGSPATIAL International Workshop on Security and Privacy in GIS and LBS (SPRINGL 2011), in conjunction with ACM SIGSPATIAL GIS
12. ACM International Symposium on Applied Computing - Mobile Computing and Applications Track (ACM SAC 2011)
13. IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA 2011) - Database, Data Mining and Data Management Track
14. The International Conference on Web-based Learning (ICWL 2011)
15. The International Workshop on Data Management for Emerging Network Infrastructures (DaMEN 2011), in conjunction with DASFAA
16. The Doctoral Symposium on Data Mining (DSDM 2011), in conjunction with PAKDD
17. IEEE International Workshop on Multi Constraints Algorithms for Wireless Networks, in conjunction with ICISA 2011
18. ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2010)
19. IEEE/IFIP International Conference on Embedded and Ubiquitous Computing - Sensor Networks Track (IEEE/IFIP EUC 2010)

D. Invited Journal Reviewer

1. ACM Transactions on Database Systems (ACM TODS)
2. IEEE Transactions on Mobile Computing (IEEE TMC)
3. IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE)
4. IEEE Transactions on Parallel and Distributed Systems (IEEE TPDS)
5. IEEE Transactions on Vehicular Technology (IEEE TVT)
6. IEEE Transactions on Network and Service Management (IEEE TNSM)
7. Springer Geoinformatica
8. Elsevier Ad Hoc Networks
9. Elsevier Computer Networks
10. Springer Wireless Networks (WINET)
11. Springer Mobile Networks and Applications (MONET)
12. Springer Distributed and Parallel Databases (DAPD)
13. Springer Knowledge and Information Systems (KAIS)
14. Springer World Wide Web Journal (WWW Journal)
15. Journal of Computer Science and Technology (JCST)
16. KSII Transactions on Internet and Information Systems (TIIS)
17. Inderscience International Journal of Sensor Networks

18. HumanPub International Journal of Information Processing and Management (IJIPM)
19. Hindawi International Journal of Vehicular Technology
20. ACTA Press International Journal of Computers and Applications
21. Journal of Zhejiang University Science C (Computers & Electronics)

Professional Memberships

2002 - Present	Member of IEEE
2002 - Present	Member of ACM