RESUME

Name:	Raymond Chi-Wing Wong
E-mail address:	raywong@cse.ust.hk
Nationality:	British (Hong Kong SAR)
	Hong Kong citizen, holding US non-immigrant B1/B2 visas
My Homepage:	http://www.cse.ust.hk/~raywong
My Updated CV:	http://www.cse.ust.hk/~raywong/Resume-cwwong.pdf

Education:

2005-2008	The Chinese University of Hong Kong (Computer Science and Engineering) (PhD)
2002-2004	The Chinese University of Hong Kong (Computer Science and Engineering) (Master of Philosophy)
1999-2002	The Chinese University of Hong Kong (Computer Science) (Bachelor of Science) (First Honour)
1992-1999	Immaculate Heart of Mary College
1986-1992	The Salvatory of Tin Ka Ping Primary School

Current Employment:

Assistant Professor

the Hong Kong University of Science and Technology

(Computer Science and Engineering)

(2008-)

Awards:

1. PCCW Foundation Scholarship (HK$15,000)(provided by the *Pacific Century CyberWorks Foundation*), 2007-2008

2. Second-runner-up of IEEE (HK) Computational Intelligence Chapter FYP and PG Paper Competition 2007 (HK$500) (provided by *IEEE (Hong Kong) Computational Intelligence Chapter*), 2007

3. Excellent Teaching Assistant (TA) of CSE (*Introduction to Database Systems*), 2006-2007 (First Term)

4. Sir Edward Youde Memorial Fellowship (HK$30,000) (provided by *Sir Edward Youde Memorial Fund Council*), 2006-2007

5. Chung Hwa Travel Service Scholarship (HK$20,000)(provided by *Chung Hwa Travel Service*), 2006-2007

6. SIGKDD 2006 Student Travel Award (US$600)(provided by *IBM Research*), 2006

7. Excellent Teaching Assistant (TA) of CSE (*Advanced Topics in Database Systems*), 2005-2006 (Second Term)

8. Excellent Teaching Assistant (TA) of CSE (*Introduction to Database Systems*), 2005-2006 (First Term)

9. PCCW Foundation Scholarship (HK$15,000)(provided by *the Pacific Century CyberWorks Foundation*), 2005-2006

10. 5th ACM Postgraduate Research Day Merit Award (HK$100)(provided by *ACM(HK)*), 2004

11. ICDM 2003 Student Travel Award (US$500)(provided by *IBM Research*), 2003

12. Graduate Studentship (provided by *the Chinese University of Hong Kong*), 2002-2004 (Consecutive Two Years) and 2005-2008 (Consecutive Three Years)

13. First Honour (Computer Science) (provided by the Chinese University of Hong Kong), 2002

14. Swire Scholarship (HK$36,000+HK$36,000) (provided by *the John Swire and Sons*), 2000-2002 (Consecutive Two Years)

15. Dean's List (Computer Science) (provided by the Chinese University of Hong Kong), 1999-2002 (Consecutive Three Years)

16. Academic Subject Prize (i.e., the top student) in *Physics* (provided by Immaculate Heart of Marry College (IHMC)), 1998-1999

17. Academic Subject Prize (i.e., the top student) in *Pure Mathematics* (provided by Immaculate Heart of Marry College (IHMC)), 1998-1999

18. Academic Subject Prize (i.e., the top student) in *Mathematics* (provided by Immaculate Heart of Marry College (IHMC)), 1996-1997

Publication:

A. Journal/Chapter:

1. **Raymond Chi-Wing Wong**, Jian Pei, Ada Wai-Chee Fu, and Ke Wang. "Online Skyline Analysis with Dynamic Preferences on Nominal Attributes". IEEE Transactions on Knowledge and Data Engineering (TKDE) (accepted)

2. Jiuyong Li, **Raymond Chi-Wing Wong**, Ada Wai-Chee Fu, and Jian Pei. "Anonymisation by Local Recoding in Data with Attribute Hierarchical Taxonomies". IEEE Transactions on Knowledge and Data Engineering (TKDE) (accepted)

3. Ada Wai-Chee Fu, Eamonn Keogh, Leo Yung-Hang Lau, Chotirat Ann Ratanamahatana, **Raymond Chi-Wing Wong**, "Scaling and Time Warping in Time Series Querying", VLDB Journal 17(4): 899-921 (2008)　[Number of citations: 15]

4. **Raymond Chi-Wing Wong** and Ada Wai-Chee Fu, "Mining Top-K Frequent Itemset from Data Streams", Journal of Data Mining and Knowledge Discovery, Volume 13, Number 2, 2006, pp193-217

5. **Raymond Chi-Wing Wong**, Ada Wai-Chee Fu and Ke Wang, "Data Mining for Inventory Item Selection with Cross-Selling Considerations", Journal of Data Mining and Knowledge Discovery, Volume 11, 2005, pp81-112 [Number of citations: 5]

6. Sze-Chung Ngan, Tsang Lam, **Raymond Chi-Wing Wong** and Ada Wai-Chee Fu, "Mining N-most Interesting Itemsets without support threshold by the COFI-tree", International Journal of Business Intelligence and Data Mining, Vol. 1, No. 1, pp.88–106, 2005 [Number of citations: 4]

7. Eric Ka Ka Ng, Ada Wai-Chee Fu and **Raymond Chi-Wing Wong**, "Projective Clustering by Histograms", IEEE Transactions on Knowledge and Data Engineering (TKDE), pp 369-383, Vol. 17, No. 3, March, 2005 [Number of citations: 8]

8. **Raymond Chi-Wing Wong** and Ada Wai-Chee Fu, "Association Rule Mining and Its Applications to MPIS", Chapter in Encyclopedia of Data Warehousing and Mining, to appear. Information Science Publishing (an imprint of Idea Group Inc.) in the Spring of 2005.

B. Conference:

1. **Raymond Chi-Wing Wong**, Ada Wai-Chee Fu, Jian Pei, Yip Sing Ho, Tai Wong and Yubao Liu, "Efficient Skyline Querying with Variable User Preferences on Nominal Attributes", the 34th International Conference on Very Large Data Bases (VLDB'08), Auckland, New Zealand on 24-30 Aug, 2008

2. Yingyi Bu, Ada Wai-Chee Fu, **Raymond Chi-Wing Wong**, Lei Chen and Jiuyong Li, "Privacy Preserving Serial Data Publishing By Role Composition", the 34th International Conference on Very Large Data Bases (VLDB'08), Auckland, New Zealand on 24-30 Aug, 2008

3. Hong-Ning Dai, Kam-Wing Ng, **Raymond Chi-Wing Wong** and Min-You Wu, "On the Capacity of Multi-Channel Wireless Networks Using Directional Antennas", The 27th IEEE International Conference on Computer Communications (INFOCOM 2008), Phoenix, Arizona on April 13-18, 2008 (Acceptance 236/1152 = 20.5%)

4.   **Raymond Chi-Wing Wong**, Ada Wai-Chee Fu, Ke Wang and Jian Pei. "Minimality Attack in Privacy Preserving Data Publishing", the 33rd International Conference on Very Large Data Bases (VLDB'07), Vienna, Austria on Sept 23-28, 2007 (Acceptance 46/263 = 17.5%)

5.   **Raymond Chi-Wing Wong**, Yufei Tao, Ada Wai-Chee Fu and Xiaokui Xiao. "On Efficient Spatial Matching", the 33rd International Conference on Very Large Data Bases (VLDB'07), Vienna, Austria on Sept 23-28, 2007 (Acceptance 46/263 = 17.5%)

6.   **Raymond Chi-Wing Wong**, Jian Pei, Ada Wai-Chee Fu and Ke Wang, "Mining Favorable Facets", the Thirteenth ACM SIGKDD international conference on knowledge discovery and data mining (KDD), San Jose, California, USA on Aug 12-15, 2007 (Acceptance 92/513 = 17.93%) [Number of citations: 1]

7.   Chi-Wah Wong, Oscar C. Au, **Raymond Chi-Wing Wong**, Hong-Kwai Lam, "Linear Real-time Rate Control", HKIE Transactions, Vol. 14, Issue 1, Mar 2007

8.   Chi-Wah Wong, Oscar C. Au, **Raymond Chi-Wing Wong**, "Advanced Real-time Rate Control in H.264", the International Conference on Image Processing (ICIP), San Antonio, Texas on Sept 16-19, 2007

9.   **Raymond Chi-Wing Wong**, Yubao Liu, Jian Yin, Zhilan Huang, Ada Wai-Chee Fu and Jian Pei, "(alpha, k)-anonymity Based Privacy Preservation by Lossy join", the 8th International Conference on Web-Age Information Management, Huangshan (Yellow Mountains), China on June 16-18 2007 (Acceptance 49/554 = 8.84%) [Number of citations: 9]

10. Chi-Wah Wong, Oscar C. Au, **Raymond Chi-Wing Wong**, "Advanced Macro-block Entropy Coding in H.264", ICASSP 2007, Honolulu, Hawaii on April 15-20, 2007

11. Jiuyong Li, **Raymond Chi-Wing Wong**, Ada Wai-Chee Fu and Jian Pei, "Achieving k-Anonymity by Clustering in Attribute Hierarchical Structures", DaWaK 2006, Krakow, Poland on Sept 4-8, 2006 (Acceptance 52/145 = 35.9%) (Selected as one of the 6 best papers to appear in the special issue of International Journal of Data Warehousing and Mining) [Number of citations: 1]

12. **Raymond Chi-Wing Wong**, Jiuyong Li, Ada Wai-Chee Fu and Ke Wang, "(alpha,k)-Anonymity: An Enhanced k-Anonymity Model for Privacy Preserving", SIGKDD 2006, Philadelphia, USA on Aug 20-23, 2006 (Acceptance 105/457 = 23%)

13. Ada Wai-Chee Fu, **Raymond Chi-Wing Wong**, and Ke Wang, "Privacy-Preserving Frequent Pattern Mining Across Private Databases", The 2005 IEEE International Conference on Data Mining (ICDM), Houston, Texas on November 27-30, 2005 (Acceptance 141/630 = 22.38%) [Number of citations: 2]

14. Chi-Wah Wong, Oscar C. Au, **Raymond Chi-Wing Wong** and Hong-Kwai Lam, "Piecewise Linear Model for Real-Time Rate Control", 2005 IEEE International Conference on Acoustics, Speech, and Signal Processing, Philadelphia, PA, USA, on March 19-23, 2005

15. **Raymond Chi-Wing Wong** and Ada Wai-Chee Fu, "Mining Top-K Itemsets over a Sliding Window Based on Zipfian Distribution", SIAM International Conference on Data Mining, on April 21-23, 2005 (Acceptance 79/218 = 36.24%) [Number of citations: 3]

16. Chi-Wah Wong, Oscar C. Au, **Raymond Chi-Wing Wong** and Hong-Kwai Lam, "Real-Time Rate

Control Via Variable Frame Rate and Quantization Parameters", Advances in Multimedia Information Processing - PCM 2004: 5th Pacific Rim Conference on Multimedia, Tokyo, Japan, on November 30 - December 3, 2004

17. **Raymond Chi-Wing Wong** and Ada Wai-Chee Fu, "ISM: Item Selection for Marketing with Cross-Selling Considerations", The Eighth Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), Sydney, Australia on May 26-28, 2004 (Acceptance 50/235 = 21.3%) [Number of citations: 5]

18. **Raymond Chi-Wing Wong**, Ada Wai-Chee Fu and Ke Wang, "Choosing Best Items by Considering Relationships Between Items", 5th ACM Postgraduate Research Day, the Chinese University of Hong Kong on 31 Jan, 2004

19. **Raymond Chi-Wing Wong**, Ada Wai-Chee Fu and Ke Wang, "MPIS: Maximal-Profit Item Selection with Cross-Selling Considerations", The 2003 IEEE International Conference on Data Mining (ICDM), Melbourne, Florida on November 19-22, 2003 (Acceptance 58/501 = 11.6%) [Number of citations: 12]

Estimated impact of publications: (from http://citeseer.ist.psu.edu/impact.html)

Rank	Name	Impact Factor	Percentile
24	Data Mining and Knowledge Discovery	2.08	top 1.96%
51	VLDB Journal:	1.81	top 4.17%
75	KDD	1.68	top 6.14%
106	VLDB	1.5	top 8.68%
133	INFOCOM	1.39	top 10.89%
194	TKDE	1.19	top 15.88%
605	ICIP	0.51	top 49.54%
731	ICDM	0.35	top 59.86%
760	DaWaK	0.33	top 62.24%
801	PAKDD	0.30	top 65.60%
1029	WAIM	0.11	top 84.27%
1154	IEEE Pacific Rim Conference on Multimedia	0.03	top 94.51%

Academic Activity:

1. **Reviewers of conferences**: PinKDD08, KDD08, SIGMOD08, SDM08, PAKDD08, EDBT08, ICDE08, ICDM07, VLDB07, DBMAN07, PAKDD07, ICDE07, ICDM06, DaWaK06, KDD06, WAIM06, PAKDD06, EDBT06, the IASTED International Conference on Databases and Applications (DBA) 2005, VLDB05, ICDM04, ICDE04, ICDM03

2. **Reviewers of journals**: IEEE Transactions on Knowledge and Data Engineering (TKDE) 2008, Very Large Data Bases Journal (VLDBJ) 2008, ACM Transactions on Knowledge Discovery from Data (TKDD) 2008, Journal of Knowledge and Information Systems (KAIS) 2007, Journal of Data Mining and Knowledge Discovery (DAMI) 2007, IEEE Transactions on Knowledge and Data Engineering (TKDE) 2006, Journal of Data Mining and Knowledge Discovery (DAMI) 2006, TKDE 2005, International Journal of Data Warehousing and Mining (IJDWM) 2005, Very Large Data Bases Journal (VLDBJ) 2005, Journal of Parallel and Distributed Computing 2005, the journal - Systems & Control Letters 2003

3. **Referees:** IEEE Transactions on Knowledge and Data Engineering (TKDE) 2008, IEEE Transactions on Semiconductor Manufacturing 2008, Journal of Data Mining and Knowledge Discovery (DAMI) 2007, Journal of Knowledge and Information Systems (KAIS) 2007, the journal - Systems & Control Letters 2003

4. **Program Committee:** VLDB 2009, APWeb-WAIM 2009, the first International workshop on Web-based Contents Management Techniques (WCMT'09) to be held in conjunction with WAIM'09/APWeb'09, Post-Mining of Association Rules: Techniques for Effective Knowledge Extraction 2008

5. **Co-chair:** the first International Workshop on Privacy-Preserving Data Analysis (PPDA'09) to be held in conjunction with DASFASS'09

6. **Student Helper of conferences**: ICDM06, KDD06, VLDB02

7. **Some Administrative Work of conferences**: ICDM03

Research Interest:

Database, Data Mining, Security, Data Mining for Business Applications, Customer-Centric Data Analysis, Data Warehouse, Decision Making, Data Streams, Video Compression and Computer Music

Research Experience:

1. **Visiting Scholar at University of Waterloo** (Jun 2008-Jul 2008)
   To conduct research with Prof. Tamer Ozsu at University of Waterloo

2. **Summer Intern at IBM T.J. Watson Research Center** (Aug 2007-Sept 2007)
   To conduct research with a researcher, Prof. Philip S. Yu, at IBM T.J. Watson Research Center in New York

3. **Research Visitor at SFU (Simon Fraser University)** (May 2006-Aug 2006)
   To conduct research with two professors, Prof. Jian Pei and Prof. Ke Wang, at Simon Fraser

University in Canada

4. **Research Assistant at HKU ETI (E-Business Technology Institute)** (May 2005-July 2005)

   To do the research work on "Drill Process Monitoring System – Drill Depth Calculation"

5. **Research and Development Assistant at CUHK CSE (Computer Science and Engineering)** (Aug 2004-April 2005)

   To do the R&D work with a local company called Lifewood on data mining in industrial funded projects

6. **Summer Research Assistant at HKU ETI(E-Business Technology Institute)** (July-Aug 2001)

   To do a research project about e-business and computer security

Teaching Experience:

1. **University Course Tutor at CUHK CSE (Computer Science and Engineering)** (Aug 2002-July2004, Aug 2005-July2007)

   To assist to teach university courses

   - Introduction to Database Systems (Basic Concept in Database) (2002 Fall, 2003 Fall, 2005 Fall and 2006 Fall)
   - Advanced Topics in Database Systems (Advanced Topics in Database) (2003 Spring, 2004 Spring, 2006 Spring and 2007 Spring) (Course Evaluation = 5.57/6.0)

2. **Summer Teaching Assistant and Mentor at CUHK CSE ITTC (Computer Science and Department's IT Training Centre)** (July-Aug 2002)

   To assist the primary/secondary students to learn some IT skills in two courses:

   - Multimedia (Dream Weaver, Flash, Corel Draw, SoundForge and Powerpoint)
   - Computer Music (Cakewalk, Noteworthy, Band-in-a-box, Finale, AmazingMIDI, ENCORE and PrintMusic)

3. **Violin Tutor** (2000-2001)

   To teach children to learn basic violin skills

4. **Secondary Private Tutor** (1997-1999)

   To help secondary students to tackle HKCEE exam in subjects Mathematics, Physics, and Chemistry.

Mentoring Experience:

- **FYP Consultant/Assistant** (Aug 2004-April 2008)

  To assist the FYP (Final Year Project) students to complete the project

  - Application of Skyline (Aug 2007-April 2008)
  - Data Mining and Skyline Queries (Aug 2006-April 2007)
  - Sequential Release for Privacy Preservation (Aug 2006-April 2007)
  - Privacy-Preserving Data Mining (Aug 2005-April 2006)
  - Discovery of Exceptional Behaviour from Data (Aug 2004-April 2005)
  - Mining Interesting Patterns in Large Database (Aug 2004-April 2005)

Conference Talks/Invited Talks:

1. Topic: "Minimality Attack in Privacy Preserving Data Publishing"
   University: University of Waterloo, Waterloo, Canada
   Date: July 18, 2008

2. Topic: "On Efficient Spatial Matching"
   University: Simon Fraser University, Vancouver, Canada
   Date: Jun 13, 2008

3. Topic: "Minimality Attack in Privacy Preserving Data Publishing"
   Conference: VLDB07, Vienna, Austria
   Date: Sept 23-28, 2007

4. Topic: "On Efficient Spatial Matching"
   Conference: VLDB'07, Vienna, Austria
   Date: Sept 23-28, 2007

5. Topic: "Mining Favorable Facets",
   Conference: KDD07, San Jose, California, USA
   Date: Aug 12-15, 2007

6. Topic: "(alpha,k)-Anonymity: An Enhanced k-Anonymity Model for Privacy Preserving"
   Conference: SIGKDD 2006, Philadelphia, USA
   Date: Aug 20-23, 2006

7. Topic: "Privacy-Preserving Frequent Pattern Mining Across Private Databases"
   Conference: ICDM05, Houston, Texas
   Date: November 27-30, 2005

8. Topic: "Mining Top-K Itemsets over a Sliding Window Based on Zipfian Distribution"
   Conference: SDM05, New Port, California, USA
   Date: April 21-23, 2005

9. Topic: "ISM: Item Selection for Marketing with Cross-Selling Considerations"
   Conference: PAKDD04, Sydney, Australia
   Date: May 26-28, 2004

10. Topic: "Choosing Best Items by Considering Relationships Between Items"
    Research Day: 5th ACM Postgraduate Research Day, the Chinese University of Hong Kong
    Date: 31 Jan, 2004

11. Topic: "MPIS: Maximal-Profit Item Selection with Cross-Selling Considerations",
    Conference: ICDM03, Melbourne, Florida
    Date: November 19-22, 2003

Qualifications:

HKCEE (1997)	
Mathematics	A
Biology	B
Chemistry	A
Physics	A
Additional Mathematics	A
Computer Studies	A

HKALE (1999)		
AL	Chemistry	A
	Physics	B
	Pure Mathematics	A

ABRSM:

Violin Grade 4
Music Theory Grade 8

Oracle:

Oracle9i Database Administrator Certified Associate (OCA)

Japanese Foundation and Japan Educational Exchanges and Services:

Japanese Language Proficiency Test (Level 3) (Out of four levels)

CUHK Results:

Undergraduate - First Honour (BSc) (Computer Science)

1st year 1st semester (1999)	GPA: 3.65/4.0	1st year 2nd semester (2000)	GPA: 3.70/4.0
Intro to Computer Programming	A	Data Structure	A
Digital Logic	A-	Comp Structure & Assem Lang Prog	A
Discrete Mathematics	A-	Numerical Methods	A
Astronomy	A-	Probability Models & Appli'ns	A
Aspects of General Education	B	Chinese Society	B
Perspective in Mathematics	A	Student-oriented Teaching & Sem	A-
Linear Algebra and Applications	A	Mathematics For Applications	A-

2nd year 1st semester (2000)	GPA: 3.59/4.0	2nd year 2nd semester (2001)	GPA: 3.66/4.0
Formal Lang & Automata Theory	A-	Software Engineering	A
Design & Analysis of Algorithms	A-	Introduction to Operating Systems	B+
Introduction to Database Systems	A	Principle of Computer Graphics	A
Principles of Programming Lang	B+	Introduction to Multimedia Systems	A-
Putonghua I	A-	Computer System Architectures	B+
		Putonghua II	A-

3rd year 1st semester (2001)	GPA: 3.93/4.0	3rd year 2nd semester (2002)	GPA: 3.84/4.0
Fund of Artificial Intelligence	A	Computer Society	B+
Final Year Project	A	Final Year Project	A
Data Commun & Compu Networks	A	Adv Topics in Database Systems	A
Adv Top in Software Engineering	A-	Computer and Network Security	A

Postgraduate – MPhil (Computer Science and Engineering)

1st year 1st semester (2002)	GPA: 3.83/4.0	1st year 2nd semester (2003)	GPA: 4.0/4.0
Techniques for Data Mining	A	CAD for Digital Systems	A
Image Processing & Comp Vision	B+	Adv Topics in Artificial Intelligence	A
Research Project for MPhil Studies	A	Research Project for MPhil Studies	A

2nd year 1st semester (2003)	GPA: 3.93/4.0	2nd year 2nd semester (2004)	GPA: 3.92/4.0
Research Project for MPhil Studies	A	Research Project for MPhil Studies	A
New Practical Japanese I	A-	New Practical Japanese II	A-

Postgraduate – PhD (Computer Science and Engineering)

1st year 1st semester (2005)	GPA: 3.70/4.0	1st year 2nd semester (2006)	GPA: 3.50/4.0
Research for PhD (FT)	P	Research for PhD (FT)	P
Japanese Improving Strategy	A-	Adv. Topics in Computer Sci. I	A-
		New Business Japanese	B+

2nd year 1st semester (2006)	GPA: -/4.0	2nd year 2nd semester (2007)	GPA: -/4.0
Research for PhD (FT)	P	Research for PhD (FT)	P

Extra-curricular Activities:

Playing the violin	1991-2007
English Club (Member)	1992-1993
Chinese Club (Member)	1993-1997
History Club (Member)	1995-1996
JPC Club (Committee)	1997-1999
Guidance Prefect	1995-1999
Green Wonderland	1999-2001
Astronomy Club	1999-2001

Skills:

1	**Office Software**
	Word, Excel, PowerPoint
2	**Web Software**
	Flash, FrontPage, Dream Weaver, Apache, Tomcat
3	**Graphics Software**
	Photo Impact, Gif animator, Blender, ImageMagick
4	**Computer Music Software**
	Cakewalk, Noteworthy, Band-in-a-box, Finale, AmazingMIDI, ENCORE and PrintMusic
5	**Programming Language**
	HTML, DHTML, JavaScript, C, Java, Pascal, ASP, JSP, Servlet, CGI, Perl
6	**Database**
	SQL, Oracle, SQLPLUS, LECCO Expert, XML, XSL
7	**Others**
	CORBA, SAS System Enterprise Miner, Frontline Solver, iLog Cplex

Interests:

Playing the violin
Swimming
Playing badminton
Listening to music songs
Programming (Pascal, C, Java, Perl)
Playing computer games
Composing Songs

Language:

Cantonese
English
Putonghua
Japanese

FYP (Final Year Project):

Title: Server-Assisted Wireless Public-Key Infrastructure

Description: This project aims at developing a data security technology for enabling e-commerce on wireless platforms. When bridging a client (mobile device such as wireless Palm) with an application server, the wireless gateway also exposes a security loophole of the architecture. An end-to-end security solution is to enhance the client device with SIM/WIM smart-card to handle the expensive PKI (Public-Key Infrastructure) operations bypassing the SSL/WTLS exchange at the gateway.

As an alternative, the server-assisted schemes of RSA cryptography called "SARSA" (Server-assisted RSA algorithm) and ECC cryptography called "SAECC" (Server-assisted ECC algorithm) are proposed. The schemes provide the basis for an effective but low-cost solution to the PKI support for wireless clients. The client, by driving the gateway server to compute the RSA/ECC cryptographic processing on his/her behalf, can accomplish PKI functions with his/her own minimal resources. Of course, the gateway is blinded of the computational parameters to prevent information leakage and to uphold end-to-end security.

A pilot project with a local online wireless storefront called "Wireless PKI e-shop" is conducted to demonstrate the feasibility and practicality of the technology when applied on mobile commerce. The storefront uses not only SARSA/SAECC utilities but also message digest (e.g. MD5) and secret (symmetric) key encryption (e.g. DES) so as to illustrate a successful and secure transaction used in the mobile commerce.

Outcome of the project is expected to benefit all parties, including the network operators, device manufacturers, solution providers, and online merchants. The public customers will be the ultimate beneficiaries when the convenience of e-banking, online shopping and information access becomes real in our daily life.

This project is co-operated with IBM and HKU.

References:

- Ada Wai-Chee Fu

  Associate Professor

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  Shatin, NT, Hong Kong

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- Philip S. Yu

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  http://domino.research.ibm.com/comm/research_people.nsf/pages/psyu.index.html