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Assistant Professor

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Education

- Ph.D. (Computer Science and Engineering), 2003, University of Michigan, Ann Arbor, Michigan, USA
- M.S. (Computer Science and Engineering), 1999, University of Michigan, Ann Arbor, Michigan, USA
- B.S. (Electrical and Computer Engineering), 1997, Minor in Computer Science, University and College Honors, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA

Certification:

- Sun Certified Java Programmer, November 2004
- MCAD (Microsoft Certified Application Development) C# .NET, October 2005

Working Experience

- Associate Director for Administration,
Computer Center, Khon Kaen University March 2007 – Present
- Assistant Dean of Academic Affairs, Faculty of Engineering,
Khon Kaen University May 2005 – March 2007
- Chairman, Graduate Study of the Department of Computer Engineering,

Khon Kaen University

August 2004 – May

2005

- Advisor, E-Saan Software Park, plans and supervises about the training courses for students and people April 2004 – May 2005
- Lecturer, Department of Computer Engineering, Faculty of Engineering, Khon Kaen University September 2003 – February 2006
- Assistant Professor, Department of Computer Engineering, Faculty of Engineering, Khon Kaen University February 2006 – Present

Teaching Experience

Courses taught at Department of Computer Engineering, Khon Kaen University

- 178110 Computer Programming
- 178214 Computer Engineering Workshop
- 178221 Digital Logic Design Laboratory
- 178370 Database Systems
- 178375 XML and Web Services
- 178376 XML and Web Services Laboratory
- 178341 Data Communication and Computer Networks Laboratory I
- 178471 Software Engineering
- 178491 Seminar in Computer Engineering
- 178498 Computer Engineering Pre-Project
- 178499 Computer Engineering Project
- 188230 Advanced Computer Programming
- 188752 Web Technologies

Invited instructor

An invited instructor at Software Park Thailand, CCPP National Science Technology Development Agency, E-Saan Software Park, Suan Dusit Rajabhat University, Aerothai, and Electricite Du Laos

1. *Database System Design*, Electricite Du Laos, Vientiane, Lao PDR, April 1-3, 2009
2. *Moodle for Teachers*, Khon Kaen University, November 6, 2007
3. *Java Web Services*, Software Park Thailand, October 15-19, 2007
4. *Moodle for Teachers*, Faculty of Nursing, Khon Kaen University, April 23, April 30, 2007
5. *Java Web Services*, Software Park Thailand, March 19-23, 2007
6. *Moodle for Teachers*, e-Library Project, Khon Kaen University, March 9, 2007
7. *Moodle for Teachers*, Rajabhat Udon Thani University, November 2, 2006
8. *Basic XML and Web Services Tutorial*, National Computer Science and Engineering Conference (NCSEC) 2006, Khon Kaen University, October 25, 2006
9. *Moodle for Teachers*, Faculty of Engineering, Khon Kaen University, Khon Kaen, October 16-17, 2006
10. *Java Web Services*, Software Park Thailand, Oct 2-6, 2006
11. *Java Web Services*, International Medical Software, September 25-29, 2006
12. *Java Web Services*, Software Park Thailand, May 15-19, 2006
13. *Moodle for Teachers*, Khon Kaen University, May 8-9, 2006
14. *Web Services for Java Technology Programmers*, Aerothai, April 20-21, 25-27, 2006
15. *XML for Developers*, Aerothai, March 20-25, 2006
16. *Moodle for Teachers*, Khon Kaen University, March 1-2, 2006
17. *Java Web Services*, Software Park Thailand, October 26-30, 2005
18. *.NET XML Web Services*, "MCAD C# .NET Certification Boot Camp", E-Saan Software Park, October 16-21, 2005
19. *Moodle for Teachers*, Faculty of Humanities and Social Sciences, Khon Kaen University September 19, 2005
20. *Moodle for Teachers*, Faculty of Engineering, Khon Kaen University, June 6, 2005
21. *XML and Web Services*, E-Saan Software Park, May 23-27, 2005
22. *Java Web Services*, Suan Dusit Rajabhat University, April 25-29, 2005

23. *Introduction to XML*, Computer Clustering Promotion Program, National Science Technology Development Agency, March 28-29, April 4-5, 2005
24. *Java Web Services*, Software Park Thailand, March 21-25, 2005
25. *Basic XML & Web Services*, Maejo University, December 30, 2004
26. *Java Web Services*, Software Park Thailand, September 27 - October 1, 2004
27. *XML for Enterprise Data Management*, Computer Clustering Promotion Program, National Science Technology Development Agency, May 22 - June 17, 2004

Invited speaker

An invited speaker at E-Saan Software Park, Khon Kaen University, National Electronics and Computer Technology Center, Mahidol University, and Maejo University

1. *LMS and Developing e-Learning Courses*, "E-Sann ICT Festival", Khon Kaen University, August 18, 2007
2. *Skills Useful for Moodle Development and Building the Thai Moodle Development Community (Translator and Co-speaker with James Robert Pratt (Moodle Core developer))*, "MoodleMoot Thailand the 2nd: Growing the Developer Community", Impact, Muang Thong Thani, Sponsored by TCPU and SIPA, August 10, 2007
3. *SOA, Web Services, Web 2.0*, "EGAT Visiting", Faculty of Engineering, Khon Kaen, November 8, 2006
4. *Introduction to Web Services*, National Software Contest, E-Saan Software Park, Khon Kaen University, October 26, 2006
5. *SOA, Web Services, and Web 2.0*, National Electronics and Computer Technology Center (NECTEC), October 7, 2006
6. *Teaching .NET Discussion Panel*, "Microsoft Curriculum Seminar - MSDNAA Leading Edge of Technology", Charoen Thani Princess Hotel, Khon Kaen, September 11, 2006
7. *Current Trends and Challenges in Web Services Development*, "Seminars for Graduate Students", Department of Computer Science, Mahidol University, June 27, 2006

8. *Java Technology*, "KM Special", National Electronics and Computer Technology Center (NECTEC), January 25, 2006
9. *Current Trends in Web Services Development*, "MCAD C# .NET Certification Boot Camp" , E-Saan Software Park, October 4, 2005
10. *Current Trends in Web Services Development*, Web Tech Day, Suan Dusit Rajabhat University, August 20, 2005

Scholarships, Honors, and Awards

- Teaching Excellence Award, Faculty of Engineering, Khon Kaen University, Semester I, Academic Year 2005
- Thai Government Scholarship for Undergraduate and Graduate Studies, 1992-2003
- IBM Centre of Advanced Studies Fellowship, 2000-2002
- Final list of IBM Research Fellowship (Nominated from Department of Electrical Engineering and Computer Science, The University of Michigan), 2001
- Summer Fellowship, Department of Electrical Engineering and Computer Science, The University of Michigan, 1998

Software Development and Consultant

- K. Runapongsa, J. M. Patel, and H. V. Jagadish. The Michigan Benchmark: A Micro-Benchmark for XML Query Processing Systems.
<http://www.eecs.umich.edu/db/mbench/>. First release: *August 2002*.
- IT Consultant for Udon Master Tech, a company produces Flexible Printed Circuit (FPC), Udon Thani, *Feb 2004 – Feb 2005*
 - Supervising the development of Document Control System, Preventive Maintenance, and Web page

- Supervise the Development of Old Exams Download System for Faculty of Engineering Khon Kaen University (<http://e-learning.en.kku.ac.th/exampaper/>), *June 2004 – October 2004*
- Supervise the Development of Khon Kaen University Utility Management Information System (<http://eutility.kku.ac.th>), *January 2005 – October 2006*
- IT Consultant for an incubatee in Khon Kaen University Business Incubator (KKUBI), *April 2005 – October 2005*
- IT Consultant for Soft Square (1999), *September 2005 – June 2006*
- IT Consultant for A2Z Professional Travel, *November 2005 - Present*

Research Publications

- **International Journals**

- **K. Runapongsa**, J. M. Patel, H. V. Jagadish, Y. Chen, and S. Al-Khalifa, “The Michigan Benchmark: Towards XML Query Performance Diagnostics”, *Information Systems Journal*, Elsevier, Volume 31, Issue 2, April 2006, pp. 73-97

- **International Conferences**

1. **K. Runapongsa Saikaew**, Pongsak Hoontrakul, Tassaneya Sodasoi, Attapon Thaphaengphan, Real-Time Information Integration System, Industrial Projects for Undergraduate Students(IRPUS) Conference, Bangkok, Thailand, March 27-29, 2009
2. P. Lekasapon and **K. Runapongsa**, “XBrevity: XML Data Compression using Brevity Encoding”, *The 21st International Technical Conference on Circuits/Systems, Computers and Communications*, pp. II-73 – II-76, Chiang Mai, Thailand, July 2006
3. **K. Runapongsa**, J. M. Patel, R. Bordawekar, and S. Padmanabhan, “XIST: An XML Index Selection Tool”, *The 2nd International XML Database Symposium (XSym 2004)*, pp. 219-234, Toronto, Canada, August 2004

4. **K. Runapongsa** and J. M. Patel, “Storing and Querying XML Data in Object-Relational DBMSs”, *EDBT Workshops*, pp. 266-285, Crezh Republic, March 2002
5. **K. Runapongsa**, J. M. Patel, H.V. Jagadish, and S. Al-Khalifa, “The Michigan Benchmark: A Microbenchmark for XML Query Processing Systems”, *EEXTT 2002*, pp. 160-161, Hong Kong, August 2002
6. T. Nadeau, **K. Runapongsa**, and T.J. Teorey, “Binomial Multifractal Curve Fitting for View Size Estimation in OLAP”, *SCI 2001 Conference*, Volume II, pp. 194-199. Awarded Best Paper of the Management Information Systems sessions
7. H. Uchiyama, **K. Runapongsa**, and T.J. Teorey, “Progressive View Materialization Algorithm”, *The 2nd Intl. Data Warehousing and OLAP Workshop*, pp. 36-41, Kansas City, November 1999
8. **K. Runapongsa**, T. Nadeau, and T.J. Teorey, “Stroage Estimation for Multidimensional Aggregates in OLAP”, *Proc. CASCON'99*, pp. 40-54, Toronto, November 1999

- **National Journals**

- P. Lekasapon and **K. Runapongsa**, “XML Data Compression using Brevity Encoding”, *NECTEC Journal* (Accepted to be published)

- **National Conferences**

1. K. Runapongsa Saikaew, P. Hoontrakul, T. Sodasoi, A. Thaphaengphan, Real-Time Information Integration System, Industrial Projects for Undergraduate Students(IRPUS) Conference, Bangkok, Thailand, March 27-29, 2
2. A. Nanakorn, K. Runapongsa Saikaew, A. Kampusan, [Thailand Public Web Services Registry in Web 2.0 Characteristics](#), The 12th National Computer Science and Engineering Conference (NCSEC 2008), Thailand, Nov 20-21, 2008, pp. 490-497

3. N.Amarintrarak, K.Runapongsa Saikeaw, S.Tongsima, N.Wiwatwattana, [Performance Evaluation on Open Source Native XML DBMSs](#), The Joint Conference on Computer Science and Software Engineering 2008:Vol.2, Silapakorn University, Thailand, May 7-9, 2008, pp. 263-270
4. U. Maboonthop, A. Tiamsinsangworn, K. Runapongsa, J. Pengsuwan, [Web Services Invocation for Data Transfer in Grid System](#), The Joint Conference on Computer Science and Software Engineering 2007, Bangkok, Thailand, May 2-4, 2007, pp. 607-611
5. A. Chetasumon, K. Runapongsa, D. Soodphakdee, [Automatic Notification of SCORM Content Modification](#), The 2007 National Conference on Computer Information Technology, Trang, Thailand, January 31, 2007, pp. 32-36
6. C. Bootchai, K. Runapongsa, S. Tongsima, K. Sripanichkulchai, [Applying P2P Technology for Enhancing Web Services Effectiveness](#), National Conference on Information Technology 2006, Bangkok, Thailand, Nov 2-3, 2006, pp. 253-260
7. P. Urathamakul and **K. Runapongsa**, “Improved Rule-Based and New Dictionary for Thai Word Segmentation”, *The 3rd Joint Conference on Computer Science and Software Engineering*, pp. 34-40, Bangkok, Thailand, June 2006
8. **K. Runapongsa**, P. Kaewsim, Jessada Pengsuwan, C. Bootchai, and S. Wanarat, “Public UDDI Registry for Supporting Web Services in Thailand”, *The 9th National Computer Science and Engineering Conference*, pp. 139-150, Bangkok, Thailand, October 2005
9. P. Lekasapon and **K. Runapongsa**, “XML Data Compression using Brevity Encoding”, *The 9th National Computer Science and Engineering Conference*, pp. 349-360, Bangkok, Thailand, October 2005
10. P. Urathamakul and **K. Runapongsa**, “Improved Rule-based Thai Documents”, *The 1st Northeastern Computer Science and Engineering Conference*, pp. 41-45, Khon Kaen University, Thailand, 31 March – 1 April 2005

11. P. Lekasapon and **K. Runapongsa**, “A Survey of XML Data Compression”, The 1st Northeastern Computer Science and Engineering Conference, pp. 80-87, Khon Kaen University, Thailand, 31 March – 1 April 2005
12. **K. Runapongsa** and J. M. Patel, “Storing and Querying XML Documents Without Using Schema Information”, *The 2nd National Conference on Electronic Business*, Bangkok, Thailand, December 2003

Research Interests

- SOA, Web Services, XML, Semantics Web
- Database Management Systems
- Bioinformatics
- e-Business and e-Learning
- Social Network Software
- Data Mining
- Information Retrieval

Research Grants

- Secondary Investigator, “Consolidation of BIOTEC Genome Databases”, Supported by National Center for Genetic Engineering and Biotechnology, 2006-2009
- Primary Investigator, “Public UDDI Registry for Supporting Web Services in Thailand”, Supported by National Electronics and Computer Technology Center, 2007-2008
- Primary Investigator, “Rule-based Approach and New Dictionary for Thai Words Segmentation”, Supported by the Faculty of Engineering, Khon Kaen University, 2005-2006
- Primary Investigator, “Schema Free XML Data Compression”, Supported by National Science Technology and Development Agency, 2005-2007

Research Experience

- Research intern, The IBM T.J. Watson Research Center, USA
Designed and developed an XML Index Selection Tool (XIST)
Summer 2002
- Research intern, The IBM Almaden Research Center, USA
Designed a mapping storage for schema-less XML documents
Summer 2001
- Research intern, The IBM Toronto Software Lab, Canada
Designed an XML benchmark to test database engines in storing and querying XML documents
Summer 1999 and 2000

Conference Committee

- Organizing Committee of NECSEC 2005, NCSEC 2006, JCSSE 2007
- Technical Program Committee of the National Computer Science and Engineering (NCSEC) 2004, 2005, 2006
- Technical Program Committee of the Joint Conference on Computer Science and Software Engineering (JCSSE) 2005, 2007, 2008, 2009
- Technical Program Committee of the First Northeastern Computer Science and Engineering Conference (NECSEC) 2005
- Program Committee of NSTDA Annual Conference: NAC 2005, 2007

Research Publication Review

- InterNational Conference for Electronic Business (INCEB) 2007
- NECTEC Journal
- KKU Science Journal
- Khon Kaen University Journal
- Knowledge and Information Systems (International Journal)
- Information Sciences (International Journal)

- Software-Practice & Experience (International Journal)
- Applied Statistics Conference 2006
- National Conference on Computer Information Technologies (CIT) 2009
- Technology and Innovation for Sustainable Development (TISD) 2006, 2008
- S&T in Thailand: Towards the Molecular Economy 2005
- Northeastern Computer Science and Engineering Conference (NECSEC) 2005
- Joint Conference on Computer Science and Software Engineering (JCSSE) 2005, 2007, 2008, 2009
- National Computer Science and Engineering Conference (NCSEC) 2004, 2005, 2006
- International Conference on Data Engineering (ICDE) 2004
- Very Large Database International Conference (VLDB) 2003
- IBM Centre of Advanced Studies Conference 2000 (IBM CASCON)

Activities

- Advisor of the project “Intelligent Parking System” that was awarded the honorable mention prize in *the National Software Contest 2006* in the topic “Web Services Contest: Innovation for Web Services”
- Advisor of the project “Siam eCatalog” that was awarded the third prize in *the National Software Contest 2005* in the topic “Web Services Contest: Open Connection”
- Advisor of the project “Easy Thailand Tour Services” that was awarded the honorable mention prize in *the National Software Contest 2005* in the topic “Web Services Contest: Open Connection”
- Advisor of the project “My Hero!” that was awarded the third prize in *Imagine Cup 2005* which was organized by Microsoft Thailand.
- Co-founder and advisor of Khon Kaen University SOA Web Services Group (<http://campus.en.kku.ac.th/webservices/>, <http://campus.en.kku.ac.th/campusboard>), Aug 2004 – Present
- Blogger at <http://gotoknow.org/blog/krunapon> and <http://gotoknow.org/blog/xmlws>