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Research Interests

My research focuses on *soft security* (trust management) mechanisms for e-commerce applications on top of *peer-to-peer* and *social networks*. Currently, I am interested in building *next generation, open reputation-based trust* management systems capable of integrating the information and capabilities from other systems in similar application domains. I also worked on developing Semantic Web service discovery approaches based on quality ratings and user recommendations.

Education

PhD in Computer Science (Advisor: Prof. Karl Aberer), May 2010
Swiss Federal Institute of Technology at Lausanne (EPFL), Switzerland
Thesis: High quality P2P service provisioning via decentralized trust management.
Corporate training on break-through thinking, project management, team leading, effective communication, and entrepreneurship

Engineering in Computer Science (EPFL Diploma equivalent) Apr 2001
Ho Chi Minh University of Technology, Vietnam
With highest distinction, *ranked 1st* in the cohort

Work Experience

Swiss Federal Institute of Technology at Lausanne (EPFL), Switzerland From Jul 2010
Postdoctoral researcher (3 manuscripts submitted for review)

Swiss Federal Institute of Technology at Lausanne (EPFL), Switzerland Oct 2006- Jun 2010
Research assistant- PhD student
Co-authored 13 publications at very good publication venues (200+ citations). Developed a simulation framework for reputation-based trust systems. Worked on data access-control in peer-to-peer social networks, a joint research project with T-labs Berlin, Germany and NTU Singapore.

Distributed Information Systems Laboratory, EPFL, Switzerland Oct 2004- Sep 2006
Research assistant under support of a fellowship from the Swiss government
Worked in the EU research project DIP, developed solutions and coordinated the implementation a software component to discover Semantic Web services based on their quality properties and user ratings

Ho Chi Minh City University of Technology (HCMUT), Vietnam May 2001- Jun 2004
Lecturer in Computer Science
Taught undergraduate computer science courses, participated in national and university-funded software development projects

Publication

Theses

- [1] L.-H. Vu. *High Quality P2P Service Provisioning via Decentralized Trust Management*. PhD thesis, Swiss Federal Institute of Technology Lausanne (EPFL), Lausanne, 2010.

Articles

- [2] L.-H. Vu and K. Aberer. Using identity premium for cooperation enforcement and whitewashing prevention in rational environments. *submitted*, 200x.
- [3] L.-H. Vu, T. G. Papaioannou, and K. Aberer. Impacts of trust management to optimal adversarial attacks in recommender systems. *submitted*, 200x.
- [4] A. Datta, S. Buchegger, L.-H. Vu, T. Strufe, and K. Rzadca. Decentralized online social networks. *submitted*, 200x.
- [5] L.-H. Vu and K. Aberer. Effective usage of computational trust models in rational environments. *to appear in the ACM Transaction on Autonomous and Adaptive Systems*, 200x.
- [6] L.-H. Vu, M. Hauswirth, F. Porto, and K. Aberer. A search engine for QoS-enabled discovery of Semantic Web services. *International Journal of Business Process Integration and Management*, 1(3):244–255, 2006.

Proceedings

- [7] L.-H. Vu, T. G. Papaioannou, and K. Aberer. Impacts of trust management and information sharing to adversarial cost in ranking systems. In *4th IFIP WG 11.11 International Conference on Trust Management (IFIPTM'10)*, 2010.
- [8] L.-H. Vu, S. Buchegger, A. Datta, and K. Aberer. Enabling secure secret sharing in distributed online social networks. In *25th Annual Computer Security Applications Conference (ACSAC'09)*, 2009 (acceptance rate: 20%).
- [9] L.-H. Vu, T. G. Papaioannou, and K. Aberer. Synergies of different reputation systems: challenges and opportunities. In *2009 World Congress on Privacy, Security, Trust and the Management of e-Business (PST'09)*, 2009.
- [10] L.-H. Vu and K. Aberer. Towards Probabilistic Estimation of Quality of Online Services. In *2009 IEEE International Conference on Web Services (ICWS 2009)*. IEEE, 2009 (acceptance rate: 16%).
- [11] S. Buchegger, D. Schiöberg, L.-H. Vu, and A. Datta. PeerSoN: P2P social networking - early experiences and insights. In *Proceedings of the Second ACM Workshop on Social Network Systems Social Network Systems 2009, co-located with Eurosys 2009*, 2009.

- [12] L.-H. Vu and K. Aberer. Effective usage of computational trust models in rational environments. In *Web Intelligence and Intelligent Agent Technology (WI/IAT'08)*, 2008.
- [13] L.-H. Vu, F. Porto, M. Hauswirth, and K. Aberer. An extensible and personalized approach to QoS-enabled service discovery. In *11th International Database Engineering & Applications Symposium (IDEAS'07)*, 2007 (acceptance rate: 33%).
- [14] L.-H. Vu and K. Aberer. A probabilistic framework for decentralized management of trust and quality. In *Workshop on Cooperative Information Agents (CIA '07)*, 2007 (runner-up of the best paper award).
- [15] L.-H. Vu, M. Hauswirth, and K. Aberer. Towards P2P-based semantic web service discovery with QoS support. In *Workshop on Business Processes and Services (BPS)*, 2005.
- [16] L.-H. Vu, M. Hauswirth, and K. Aberer. QoS-based service selection and ranking with trust and reputation management. In *Proceedings of Cooperation Information Systems (CoopIS'05)*, 2005 (acceptance rate: 22%).

Academic Awards

Swiss federal government fellowship for postgraduate study in Switzerland (2004-2006)

University gold medal for being ranked the first among graduates of the Department of IT, Ho Chi Minh University of Technology, Vietnam (2001)

Honorary research award, Ministry of Education and Training, Vietnam (2001)

Second prize in the Young Researchers Competition, Information Technology Track, Ho Chi Minh University of Technology, Vietnam (2001)

Scholarships for high academic achievements granted by the university and leading transnational companies, including Sumitomo, Microsoft, Intel, PSV (1996-2001)

Professional Skills

Extensive experience on reputation systems, data access control, social networks, and on simulation of complex networks.

Very good knowledge and experience in Java, knowledge of Matlab, C/C++, UNIX shell-scripting.

Knowledge of several Java technologies (J2EE, JSP/Servlet, JDBC, JUnit), C/C++ libraries (Qt, MFC, LAM-MPI).

Knowledge of important development methodologies: agile/extreme programming, test-driven development.

Knowledge of most used development tools: Web and application servers (Apache, Tomcat, Orion), DBMS (MySQL, Derby, Oracle), modeling tools (UML/Visio), IDEs (Eclipse, Kdevelop, Qt Designer, MS Visual Studio), versioning tools (SVN, CVS), etc.

Advanced experience working with both UNIX and Windows operating system families.

Languages

Vietnamese (native), English (fluent), French (good), German (beginner)

Professional Activities

Official and/or external reviewer for several journals, conferences, and workshops, including WWWJ, TKDE, ICDE, SIGMOD, VLDB, P2P, WWW, ICWS, WISE (2006-current).

Teaching assistant for Distributed Information Systems, Master course, by Prof. Karl Aberer, winter semester 2007/2008.

Teaching assistant for Théorie et pratique de la programmation, Undergraduate course, by Dr. Monika Lundell and Dr. Michel Schinz, summer semester 2006/2007.

Supervisor of 2 EPFL Master and 3 semester projects (2008-2010) on the topics of peer-to-peer systems, access control on distributed social networks, and Facebook application development.

Other Activities

Coordinator/organizer of the Vietnamese student community in Lausanne, Switzerland.

Admin of the swissviet.com forum and vnlausanne mailing list, two online fora providing various practical information for Vietnamese students in Switzerland.

References

Professor Karl Aberer (karl.aberer@epfl.ch)

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Professor Manfred Hauswirth (manfred.hauswirth@deri.org)

Digital Enterprise Research Institute (DERI),

National University of Ireland (NUIG),

IDA Business Park, Lower Dangan, Galway, Ireland.

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Associate Professor Sonja Buchegger (buc@csc.kth.se)

School of Computer Sciences and Communication (CSC),

Royal Institute of Technology (KTH),

Osquars Backe 2, 4tr., SE-100 44 Stockholm, Sweden.

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