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Center for Global Electronic Commerce

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Greetings from the Director

France Bélanger, CGEC Director

The Center for Global Electronic Commerce continues to promote practical, interdisciplinary research in the areas of electronic business; respond to industry need in these areas; and support electronic business education. I am pleased to present you with the first CGEC newsletter for this 2004-2005 fiscal year.

Many activities have occurred since our last newsletter. Projects have been funded by industry, the National Science Foundation, and other agencies (*see Sponsored Projects, below*). A conference on security and privacy was held in Washington, D.C. and seminars for entrepreneurs to develop small e-businesses were presented in several areas of Virginia. E-business education programs were reevaluated. A new book titled *Digital Business* was published by a CGEC faculty. You will find more information about these activities in the following pages.

Continuing our tradition, we feature the research of one of our faculty in each newsletter. This time we present Dr. Janine S. Hiller from the Finance Department, as well as one of our doctoral student, Anjala Krishen, from the Marketing department.

I hope you will enjoy reading about the many recent accomplishments of the members of the CGEC. Do not hesitate to contact me (*ecommerce@vt.edu*) for further information on any one of these topics.

Sponsored Projects

PACE: Persistence of African-Americans in Computing Education

National Science Foundation

CGEC members Wanda Smith and France Bélanger were awarded a \$617,000 grant from the National Science Foundations' Information Technology Workforce program to conduct a comprehensive three-year longitudinal study designed to promote and enhance the retention of African American students in information technology career tracks and graduate education.

With team members Vernard Harrington from Radford University and George Kasper from Virginia Commonwealth university, the researchers will survey and interview students and test a resilience model they have developed. The project will include workshops, an online community, internship opportunities, and mentoring. The overall mission of the project is to increase the number of African Americans electing to stay in information technology career tracks through empowerment and skill building programs. The team recently hired doctoral student Lemuria Carter to help with the research and Kristi Honaker as a Project Coordinator.

IBM Sponsored Security and Privacy Conference

The IBM Endowment for the Business of Government

CGEC member Janine S. Hiller received a grant from the IBM Endowment for the Business of Government to organize and host a conference on security and privacy. The “Fostering Public Private Partnerships for Security and Privacy” conference was held April 6th, 2004 in Washington, DC. The conference brought together leaders from government, industry and academia in a small group setting, who offered recommendations to promote the relationship between the public and private sector in order to increase security and preserve privacy.

Among others, presenters included Paul Kurtz, former Special Assistant to the President for Critical Infrastructure Protection and currently Executive Director of Cyber Security Industry Alliance, Howard Schmidt, Vice President and Chief Information Security Officer for EBay, formally Special Advisor for Cyberspace Security for the White House, Alan Paller, Director of Research for the SANS Institute, Glen Schlarman, Chief of the Information Policy and Technical Branch of the Office of Management and Budget, Stuart Katzke, Senior Research Scientist for the National Institute of Standards and Technology, Nuala O'Connor Kelly, Chief Privacy Office for the Department of Homeland Security, Ari Schwartz, Associate Director of the Center for Democracy and Technology, Mahnaz Dean, Partner, IBM, and Marios Damianides, International President, Information Technology Governance Institute. In addition, the keynote speaker was Vint Cerf, Senior Vice President Technology Strategy for MCI and Chairman of the Board of ICANN.

Security and Business Ethics Educator Resource Available

The Boeing Company

CGEC team members Sam Hicks (Accounting and Information Systems), Janine Hiller (Finance and Business Law), Nancy McGehee (Hospitality and Tourism Management), and France Bélanger have completed a compact disc resource for teaching security and ethics. The project, sponsored by the Boeing Company, resulted in a main case titled the “Queensland Rainforest Resort”, which is accompanied by seven mini-cases on ethics, four cases on IT and security, and an introduction to ethics section. Each mini-case is accompanied by discussion questions, teaching notes for instructors, as well as links to readings and resources. The CD is available from the CGEC Director.

CGEC Grant Writing Pays Off

Since January 2001, the Center for Global E-commerce has been highly involved in the Pamplin College of Business' efforts to seek external funding for faculty's research. The efforts of CGEC members and the hiring of a grant writer are finally paying off with more submissions of research grant proposals than ever before in the history of the Pamplin College of Business. Many faculty, affiliated or not with the Center, now believe it is possible to seek research funding for their research, and have started to do so. For example, during the last fiscal year approximately 24 grants were submitted with College faculty involved as principal or co-principal investigators. Of these, 12 were initiated by members of the CGEC, two were funded, and three were resubmissions of previously denied grants.

As a result, the Pamplin and CGEC faculty has now reached a new level of self-sufficiency in writing grants. Unfortunately, this also results in less requirements for the services of the CGEC grant writer, Mrs. Aaron Doyle, who is now employed by the Center on a hourly, as-needed basis. since May 1, 2004. Her services continue to be available to everyone in the Pamplin College of Business, whether a CGEC member or not.

CGEC Research

Featured Faculty Research: Dr. Janine S. Hiller

Does Internet Law really exist?

"Does Internet Law really exist?" Professor Janine Hiller is frequently asked this question when she describes her area of teaching and research. Although the answer is a most definite "yes," the uncertainties and evolution of internet law provides a fertile field for research. One of the first professors to teach Internet Law and Policy in a business school in the United States, Hiller's research focuses on two significant areas of evolving internet law: property and privacy/security.

Property law, an anachronistic field at its best and a poorly reasoned modern law at its worst, is a minefield applied to the electronic environment. In the context of websites' control as delineating in their terms of use, Hiller's research considers the conflicting values of property and place, the dichotomy of freedom of expression and public accommodation compared with private property and control of access. The legal conception of the internet as private or public, property or place, resounds in many issues including whether civil rights exist in this space and whether publicly available information can be privately controlled. Hiller's research in privacy and security includes both the public and private sector's role in promoting security while preserving privacy. Her research proposes a framework for conceptualizing the relationship between government and its constituencies, unique and different from the commercial relationship between store and customer, which will impact and clarify the protection of privacy by government. In the commercial area, Hiller studies the affect and incidents of trust on privacy.

Janine S. Hiller is a Professor of Business Law in the Department of Finance, Insurance and Business Law at Virginia Tech. She has a J.D. degree from the University of Richmond T.C. Williams School of Law, and a B.A. degree from Virginia Tech. She is a co-author of the text, "Internet Law and Policy," recently organized a conference in Washington D.C., "Fostering Public Private Partnerships for Security and Privacy" (funded by the IBM Center for the Business of Government), serves on American Bar Association committees on cybercrime, security and electronic commerce, and is the author or co-author of journal articles related to internet law.

Featured Student Research: Anjala Krishen

e-Marketing and e-Commerce

Anjala Krishen is a Ph.D. student in the Marketing Department in the Pamplin College of Business. She has several research interests related to e-business, including: e-marketing from a consumer behavior perspective, e-commerce from a cognitive psychology perspective, and marketing research concerning informant bias. She is working on research projects in all three of these areas at the moment, and will be presenting papers in two upcoming conferences. At the INFORMS Annual Meeting 2004 in Denver, Colorado, she will present "Feedback Control Design for Website Effectiveness," which she co-authored with Pushkin Kachroo and Kent Nakamoto, Head of the Marketing Department and member of the CGEC. In the 2005 Winter AMA conference in San Antonio, Texas, she will present "Within-Informant Bias in Marketing Research," which she co-authored with Marketing Professor Jim Brown.

Anjala S. Krishen graduated from Rice University in 1990 with a B.S. in Electrical Engineering. From 1990 to 1994, she worked at Oracle Corporation (Belmont, California), Information Dimensions (a subsidiary of Batelle), Lincoln Electric Company (Cleveland), and again at Oracle Corporation (Cleveland), as a software consultant. In 1994, she joined Virginia Tech Administrative Information Systems as a database administrator and began her MBA in Pamplin School of Business, Virginia Tech, part-time. In December of 1996, she completed her MBA from Virginia Tech. Following completion of her MBA, Anjala joined management positions at American Electric Power, Datapult, and finally Enerwise Corporation. In Enerwise, she managed the Regional Office as the Manager of Production and Information Systems, until 2003. After 13 years in Information Technology, she decided to return to higher education full-time, and embarked on her Ph.D. in Marketing at Virginia Tech in Fall of 2003 under the guidance of Dr. Kent Nakamoto.

Sample Recent CGEC Faculty Journal Publications

Barkhi, Reza, Erik Rolland, John Butler, and **Weiguo Fan**, "Decision Support System Induced Guidance for Model Formulation and Solution," Decision Support Systems, Forthcoming.

Barkhi, Reza, Varghese Jacob, and Hasan Pirkul, "The Influence of Communication Mode and Incentive Structure on GDSS Process and Outcomes," Decision Support Systems, Volume 37, 2004, pp. 287-305.

Barkhi, Reza, Brozovsky, John, "The Influence of Personality Type on a Distance Course in Accounting," Journal of Educational Technology Systems, Volume 32, Number 2, 2004, pp. 179-198.

Carter, Lemuria and France Bélanger, "The Influence of Perceived Characteristics of Innovating on E-government Adoption," Electronic Journal of E-Government, Volume 2, Number 1, July 2004, pp. 11-20.

Carter, Lemuria and France Bélanger, "Electronic Government Adoption: Citizen Trust, Innovation and Acceptance Factors," accepted 9/20/04 for Information Systems Journal.

Fan, Weiguo, M.D. Gordon, and P. Pathak, "A generic ranking function discovery framework by genetic programming for information retrieval", Information Processing and Management, Volume 40, Number 4, 2004, pp. 587-602.

Fan, Weiguo, M. D. Gordon, P. Pathak, "Effective profiling of consumer information retrieval needs: a unified framework and empirical comparison", Decision Support Systems, in press, 2004.

Fan, Weiguo, M. D. Gordon, P. Pathak, "Discovery of context-specific ranking functions for effective information retrieval by Genetic Programming", IEEE Transactions on Knowledge and Data Engineering, Volume 16, Number 4, 2004, pp. 523-527.

Fan, Weiguo, P. Pathak, "Discovering ranking functions for information retrieval", to appear in *Encyclopedia of Data Warehousing and Mining*, Idea Group Inc., In press, 2005.

H. Wu and **Weiguo Fan**, "E-health communities: scalability challenges to information management", to appear in *E-Health Paradigm Shift: Perspectives, Domains and Cases*, John Wiley, 2004.

D. Radev, **Weiguo Fan**, H. Qi, H. Wu, A. Grewal, "Probabilistic question answering on the web", in press, *Journal of the American Society for Information Science and Technology*, In press, 2004.

Fan, Weiguo, E. Fox and P. Pathak, H. Wu, "The effects of fitness functions on genetic programming-based ranking discovery for web search", *Journal of the American Society for Information Science and Technology*, Volume 55, Number 7, 2004, pp. 628-636.

Van Slyke, Craig, **France Bélanger**, and Varadharajan Sridhar, "A Global View of Business-to-Consumer Electronic Commerce: A Comparison of Perceptions Between American and Indian Consumers," accepted 7/1/04 for Information Resources Management Journal.

Wu, H., M. Gordon, K. Demaagd, **Weiguo Fan**, "Mining web navigations for intelligence", Decision Support Systems, in press, 2004.

Wu, H., D. R. Radev, **Weiguo Fan**, "Towards answer-focused summarization using search engines", in *New Directions in Question Answering*, edited by Mark Maybury, 2004.

Yuan, Y., C. Xu, **Weiguo Fan**, "A polynomial smooth support vector machine for classification", Journal of Classification, in press, 2004.

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New Book on Digital Business

Coupey, Eloise, *Digital Business*, Prentice Hall, 2004.

Recent Presentations

On August 19, 2004, CGEC Director France Bélanger presented "Global E-commerce Trends," at the monthly New Century Technology Council meeting in Blacksburg, VA.

On June 10, 2004, CGEC Director France Bélanger was the keynote speaker at a seminar titled "Global E-commerce" held by the Global Virginia organization in Abingdon, VA.

Education

E-business Minor

Following the decline in the IT job market and the limited enrollments in the e-business minor, the CGEC Director recommended that the minor be phased out from the Pamplin College of Business programs.

E-business Technologies Concentration

The MBA E-business Technologies concentration is being evaluated by Tarun Sen, Associate Dean for Graduate and International Programs.

NSA INFOSEC Certification

With the joint efforts of CGEC Director France Bélanger and faculty from three other departments across campus, Virginia Tech has received certification by NSA for the National INFOSEC Education and Training Program for National Standards 4011, 4012, and 4013 for its Information Assurance education courses. For the Pamplin College of Business, this involved courses in the Accounting and Information Systems and Finance Insurance and Business Law departments.