

INTERNATIONAL WORKSHOP †

Sunday

1 p.m.-5 p.m.

E-Authentication Infrastructures and their Interoperability: a corner-stone for the third millennium society

Workshop Coordinators:

- Ms. Georgia K. Marsh, Deputy Program Manager, U. S. Federal Government E-Authentication Initiative, GSA
- Prof. Enrico Nardelli, NESTOR - Univ. Roma Tor Vergata
- Prof. Maurizio Talamo, NESTOR - Univ. Roma Tor Vergata

Description: In these days, in almost all technologically advanced countries, there are initiatives (at various level of maturity) aiming at setting up citizens' e-authentication infrastructures (CEIs). By this term we mean the complex set of devices, information and communication systems and networks, organizations, regulations, and laws that make it possible to reliably answer the question "who are you?"

The irreversible shift of our society towards the use of digital technologies presents a serious challenge. As human beings we have been trained by centuries of societal evolution to beware of attempts to deceive in human-to-human interaction. But in the virtual world that exists today, human beings are forced to rely on their technological avatars. Since machines, at least with their current level of advancement, have no true human intelligence and no human sense at all, it is clear that good CEIs cannot be just masterpieces of science and engineering, but have to be clearly and deeply defined with attention to human factors, organizational issues, and legal consequences.

The goal of the International Research Workshop on "e-Authentication Infrastructures and their Interoperability: a corner-stone for the third millennium society" is to gather a few advanced countries in this area, those having already deployed initiatives at high maturity and penetration level, with the aim of having a thorough presentation of and open discussion regarding their respective approach.

Presentations (one by each participating countries) will clearly address the most relevant dimensions for a CEI:

- technological/architectural
- organizational/governance
- social
- judicial

The research target is to set the scenario for the interoperability required in the foreseeable future among various CEIs: even in countries where a CEI is widely deployed, all implications of its interoperability with other CEIs have not been fully understood and evaluated. Sharing of national approaches is therefore a mandatory step in the process of defining good cross-national interoperability solutions.

† Tutorials and workshops are open only to those who pre-registered for them

INTERNATIONAL WORKSHOP †

Sunday

Digital Government Integration & Systems Evaluation

1 p.m.-5 p.m.

Description: The purpose of this workshop is to promote international debate and highlight the research strategies needed to increase understanding of Digital Government, and the processes involved in evaluating decisions surrounding human, organisational and technical components of information society technologies (IST). In particular, the workshop will define and promote research on IST strategies and their embedded mechanisms for evaluation and integration within government and government agencies.

It is intended that the workshop's discussions will enable a deepening of the "socio-political-technical" understanding of these phenomena as an important part of the research agenda. In particular, the workshop has the following objectives:

- To start to identify relevant quantitative and qualitative evaluation techniques and strategies appropriate for use within government. New contributions, distinct from those in other IST evaluation research, can be expected to emerge in this area because the competitive pressures that drive most private sector evaluation decisions are not present.
- To start to facilitate collaborative research planning initiatives to continue to act as a forum to research and disseminate evaluation issues, thus, developing, sustaining and enriching the digital government community.

Digital government has the potential to be a major enabler in the adoption of good governance practices for all tiers of government. It should be appreciated that "digital government" focuses on the full range of government functions, ranging from information provision and integration, through e-transaction services, and including digital democracy (e-voting and e-participation). There is a clear need to share approaches to evaluation of digital government and establish agreed frameworks that will allow us to understand the success or otherwise of digital government.

TUTORIAL †

Sunday

Application of Social Network Analysis in Digital Government Research

2 p.m.-5 p.m.

Presenters:

- David Lazer, Kennedy School of Government, Harvard University
- Ines Mergel, Kennedy School of Government, Harvard University
- Noshir Contractor, University of Illinois at Urbana-Champaign

Social network analysis is a developing paradigm in academia, business and also in private lives. It spans across all kinds of academic disciplines, such as sociology, anthropology, psychology, organization studies or political sciences. It helps to map and measure of relationships and communication or resource flows between people, groups, organizations, computers or other entities. The nodes in the network are the people and groups while the

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links show relationships or flows between the nodes. Social networks are formed of social relations that consist of nodes (represented by actors, players, agents, vertices or points) and are connected by lines (ties, links or edges). The nodes can either consists of individuals or collectivities, such as organizations, political units (cities, nations, or societies). Social network analysis provides both concepts and theories, but also statistical tools to visualize and analyze the observed relationships.

The target audience of the tutorial "Application of Social Network Analysis in Digital Government Research" is any researcher interested in the theory and analysis of relationships between computer networks, organizational and institutional actors. This tutorial is intended to give an overview of the existing theories, a brief introduction into the analysis of network data using a common tool called UCInet and into different visualization methods. Moreover, specific applications for digital government researchers are presented. A Q&A session will end the tutorial, in which researchers can address their specific research needs.

We will use existing, well-known and often reanalyzed data to show the relevance of social network analysis in different fields of application. In addition, we will use our own data from different studies in the area of Digital Government to show the relevance of the method and enhance the understanding of social network analysis. After this tutorial, attendees will be able to analyze their own data using social network analysis techniques. The lecturers will submit a list of introductory readings and Internet resources on Social Network Theory and Analysis.

KEYNOTE ADDRESS

Monday

9:00 a.m.-10 a.m.

Neil Eisner, U.S. D.O.T.

"Digital Dreams: The Future of e-Government"

Neil Eisner is currently the Assistant General Counsel for Regulation and Enforcement at the U.S. Department of Transportation. Prior to this, Mr. Eisner held positions as Assistant Chief Counsel for Regulation and Enforcement and Deputy Assistant Chief Counsel for Litigation in the Federal Aviation Administration.

Abstract: Mr. Eisner will discuss the real world of digital government - how the inter- and intranet are being used by the Federal government, what the challenges have been to increasing the use of electronic technology, and what he thinks needs to be done in the future.

His primary emphasis will be rulemaking, a process that involves significant public participation. He will provide specific illustrations of the way the government uses electronic technology to do everything from researching the need for a rule, to managing the rulemaking process and allowing the public to participate more effectively, to allowing those who violate rules to pay penalties on the internet. He will talk about what works well and what does not and provide his thoughts on why - raising some of the challenges that the government faces in increasing its use of digital technology.

Finally, he will also give his ideas on the future - the social science and technological research that is needed to ensure even more effective digital government. He will note some specific areas where there are questions about what works or why the digital services are used the way they are, so that the government can make more informed decisions. In addition, he will provide examples of specific technological improvements he thinks would be especially helpful.

SESSION 1A

Monday

Technology to Support Data Gathering via the Web

10:45 a.m.-noon

- *An Efficient Nearest Neighbor Algorithm for P2P Settings*: Tanin, Egemen; Nayar, Deepa; Samet, Hanan Δ
- *Data Assignment in Fault Tolerant Uploads for Digital Government Applications: A Genetic Algorithms Approach*: Yang, Yan; Cheung, Leslie; Golubchik, Leana Δ

SESSION 1B

Monday

Transportation Systems

10:45 a.m.-noon

- *Automatic Composition of Aggregation Workflows for Transportation Modeling*: Ambite, José Luis; Weathers, Matthew Δ
- **Invited System Demo**: *Vehicular Networks in Urban Transportation Systems*: Wu, Hao; Palekar, Mahesh; Fujimoto, Richard; Lee, Jaesup; Ko, Joonho; Guensler, Randall;
- Hunter, Michael

Session 1C

Monday

Panel: Cyberinfrastructures for Public Health (Part I)

10:45 a.m.-noon

Moderators: Contractor, Noshir; Leischow, Scott

Speakers:

- Scott Leischow (HHS): Vision for developing cyberinfrastructures in public health: Initiative on the Study and Implementation of Systems" (ISIS).
- Brad Hesse (NIH/NCI): Conceptual and practical challenges to a health informatics infrastructure
- Judith Qualters (CDC): Surveillance systems to understanding environmental influences
- Helga Rippen (HHS): National Electronic Medical Record System: Relevance for Public Health
- Noshir Contractor (UIUC): Developing cyberinfrastructures to enable effective networks within the public health community.
- David Introcaso (AHRQ): Evaluating Cyberinfrastructures and the Social Networks They Enable
- Mark Parascandola (NIH/NCI): Ethical considerations in transforming the public health informatics infrastructure
- Sylvia Spengler (NSF): TBA

Abstract: The leading preventable causes of premature mortality are due in large measure to causes that can be changed, such as tobacco use, dietary behaviors, substance/alcohol abuse, injuries, communicable diseases. Yet addressing these major public health threats remain an acute challenge: they represent system-wide problems that would benefit network-centric approaches that have as a foundation the discovery, development and delivery of critical information.

The goal of this symposium will be to explore the critical health informatics foundations that must serve as a springboard for improving the major public health challenges of our time, with the recognition that such an effort will represent and result in a fundamental transformation in the public health system as we know it.

A critical theme of this panel is to assess the role of digital government in the development of these critical cyberinfrastructures. This symposium brings together expertise from several converging fields which together represent necessary infrastructures that are needed to improve both the structure and function of the health care system.

Detailed Summary: http://dgrc.org/dgo2005/program/abstract_cyberinfrastructure.jsp

Session 2A

Monday

E-Governance & Public Participation

1:30 p.m.-3p.m.

- *Towards Electronic Governance - A case study of ICT in Local Government:* Zwahr, Thomas; Rossel, Pierre; Finger, Matthias Δ
- *Modeling Online Participation in Local Government:* Kavanaugh, Andrea; Isenhour, Philip; Perez-Quinones, Manuel; Dunlap, Daniel Ω
- *Public Participation in Transportation Decision Making:* Nyerges, Timothy; Brooks, Terry; Jankowski, Piotr; Rutherford, G. Scott; Young, Rhonda Ω

SESSION 2B

Monday

e-Rulemaking

1:30 p.m.-3 p.m.

- *A Relatedness Analysis Approach for Regulation Comparison and E-Rulemaking Applications:* Lau, Gloria; Wang, Haoyi; Law, Kincho; Wiederhold, Gio Δ
- *Near-Duplicate Detection for e-rulemaking:* Yang, Hui; Callan, Jamie; Δ
- *Language Processing Technologies for Electronic Rulemaking: A Project Highlight:* Shulman, Stuart; Callan, Jamie; Hovy, Eduard; Zvestoski, Stephen Ω

SESSION 2C

Monday

Panel: Cyberinfrastructures for Public Health (Part II)

1:30 p.m.-3p.m.

Moderators: Contractor, Noshir and Leischow, Scott

SESSION 3A

Monday

e-Government - Policy, Legislation and Law

3:30 p.m.-5 p.m.

- *Governance Characteristics of Information Technology:* Shah, Rajiv C.; Kesan, Jay P. Δ
- *Connecting to Congress Project Highlights:* Lazer, David; Esterling, Kevin; Neblo, Michael; Fountain, Jane; Mergel, Ines; Ziniel, Curt Ω
- *Early Lessons from the Application of Process Technology to Online Grievance Mediation:* Katsh, Ethan; Osterweil, Leon J.; Sondheimer, Norman K.; Rainey, Daniel Ω

SESSION 3B

Monday

3:30 p.m.-5 p.m.

Panel: Preserving Information Long-Term: Digital Archiving

Panelists:

- William G. LeFurgy, manager, U.S. Library of Congress Digital Initiatives Project
- Theresa Pardo, deputy director, Center for Technology in Government, SUNY University at Albany
- Margaret Hedstrom, associate professor, University of Michigan School of Information
- Tyler O. Walters, associate director, Georgia Institute of Technology, Technology and Resource Services

A panel discussion regarding digital archiving efforts by the U.S. Library of Congress (LC). In December 2000 Congress authorized LC to develop and execute a plan for a National Digital Information Infrastructure and Preservation Program (NDIIPP). LC developed a plan, in collaboration with other federal and nonfederal entities, to build a national network of organizations with responsibilities for collecting digital materials, and to identify the policies, protocols and strategies needed for digital preservation.

In January 2005 LC launched official partnerships with eight institutions and their partners to identify, collect, and preserve digital materials within a collaborative digital preservation network. The institutions will share responsibilities for preserving at-risk digital materials of significant cultural and historical value to the nation, including digital content relating to political web sites, public television programs, geospatial data, culture and history collections, social science data, and legal and business materials relating to the birth of the dot com era.

The National Science Foundation has, in May 2005, awarded the first grants under the joint NSF/LC Digital Archiving and Long-Term Preservation (DIGARCH) program. These awards will address three critical areas: 1) Digital repository models; 2) Tools, technologies and processes; and 3) Organizational, economic and policy issues.

LC is also exploring collaborative strategies for preservation of significant state and local government information in digital form. During 2005, the Library will sponsor collaborative workshops to help states identify their needs and priorities for digital preservation. A toolkit will be made available to each state to enable this analysis.

This session will provide an update on NDIIPP overall with a focus on the three initiatives noted above. A speakers from the Library will outline goals for the partnerships and review progress in meeting those goals. A speaker from the Georgia Institute of Technology will discuss activities under one of the eight partnerships. A speaker from the University of Michigan will outline goals of a project funded by the DIGARCH program. And a speaker from the Center for Technology in Government will discuss the LC states initiative.

SESSION 3C

Monday **Alert and Crisis Management**
3:30 p.m.-5 p.m.

- *DM-AMS Employing Data Mining Techniques for Alert Management:* Janeja, Vandana; Atluri, Vijayalakshmi; Gomaa, Ahmed; Adam, Nabil; Bornhoevd, Christof; Lin, Tao Δ
- *Coplink Center:* Chen, Hsinchun; Atabakhsh, Homa; Xu, Jennifer Jie; Wang, Gang; Marshall, Byron; Kaza, Siddharth; Tseng, Lu; Eggers, Shauna; Gowda Hemanth; Petersen, Tim; Violette, Chuck Ω
- *Geocollaborative Crisis Management:* MacEachren, Alan; Fuhrmann, Sven; McNeese, Michael; Cai, Guoray; Sharma, Rajeev Ω
- *GeoInformatic Hotspot Systems (GHS) for Detection, Prioritization, and Early Warning:* Patil, G.P. Ω

DEMOS & POSTERS A

Monday **System Demonstrations & Poster Presentations (A)**
5:30 p.m.

System Demos:

- *Technology Transfer of Inter-Agency Government Services and Their Transnational Feasibility Studies:* Adam, Nabil; Atluri, Vijayalakshmi; Chun, Soon Ae; Fariselli, Patrizia; Hopper, Julia Culver; Bojic, Olana; Stewart, Rick T.; Fruscione, Jim; Manocchio, Nick
- *Enabling GeoCollaborative Crisis Management Through Advanced GeoInformation Technologies:* Cai, Guoray; MacEachren, Alan M.; Sharma, Rajeev; Brewer, Isaac; Fuhrmann, Sven; McNeese, Mike
- *Integration of Multidimensional Geospatial Information for Coastal Management and Decision-making:* Li, Ron; Bedford, Keith; Shum, C.K.; Niu, Xutong; Zhou, Feng; Velissariou, Vasilias; Ramirez, J. Raul; and Zhang, Aidong
- *Significance Information for Translation: Air Quality Data Integration:* Philpot, Andrew; Pantel, Patrick; Hovy, Eduard
- *BioPortal: An Integrated Infectious Disease Information Sharing and Analysis Environment:* Zeng, Daniel; Chen, Hsinchun; Tseng, Chunju; Larson, Catherine; Eidson, Millicent; Gotham, Ivan; Lynch, Cecil; Asher, Michael
- *Visualization in Law Enforcement:* Chen, Hsinchun; Atabakhsh, Homa; Tseng, Chunju; Marshall, Byron; Kaza, Siddharth; Eggers, Shauna; Gowda, Hemanth; Shah, Ankit; Petersen, Tim; Violette, Chuck

Posters:

- *E-government and the Preparation of Citizens for Natural and Man-Made Disasters: A Multidisciplinary Study of the Development and Usability of Hazard Information on the Web:* Basolo, Victoria; Steinberg, Laura J.; Gant, Steven ◇
- *Data mining the family tree: identification of relatives using genetic kinship analysis of DNA databases:* Bieber, Frederick; Brenner, Charles; Lazer, David ◇
- *BorderSafe: Cross-Jurisdictional Information Sharing, Analysis, and Visualization:* Chen, Hsinchun; Atabakhsh; Kaza, Siddharth; Marshall, Byron; Xu, Jennifer; Wang, G Alan; Petersen, Tim; Violette Chuck ◇

- *Hotspot Detection for Chestnut Oak Regeneration*: Fei, Songlin ◇
- *The National Center for Digital Government*: Fountain, Jane; Lazer, David Ω
- *Centralized or Decentralized Organization?:* Janssen, Marijn ◇
- *Community E-government Coordination Work Platform*: Jiang, Luquan; Zhang, Pengzhu; Wang, Huanchen ◇
- *Topological Analysis of Criminal Activity Networks in Multiple Jurisdictions*: Kaza, Siddharth; Xu, Jennifer; Marshall, Byron; Chen, Hsinchun ◇
- *The Hare and the Tortoise: Network structure in collaborative problem solving*: Lazer, David; Friedman, Allan Δ
- *Virtual Machines in Transnational Digital Government: a Case Study*: Matsunaga, Andrea; Tsugawa, Mauricio; Fortes, José A.B. ◇
- *Exploring the Spatio-temporal Variation of Seagrass Ecosystems in Southern Tampa Bay*: Li, Ron; Niu, Xutong ◇
- *Research In Progress: A Preliminary Theoretical Framework For Understanding E-governance Initiatives*: Mundkur, Anu ◇
- *Using GIS Technology to Assess the Prudence of Municipal Growth through Annexation*: O'Looney, John ◇
- *Digital Government Community Building and Outreach*: Reed, Mack; Arens, Yigal Ω
- *Employing the Mobility Paradigm: the Next Big Leap in Digital Government?:* Scholl, Hans ◇
- *Governing with Information Technologies*: Kesan, Jay; Shah, Rajiv Ω
- *A Study of Smart Growth Initiatives using GIS: The case of Austin, Texas*: Tu, Wei; Li, Lixin; Piltner, Reinhard ◇
- *Searching for Geospatial Government-Produced Data*: Wiegand, Nancy ◇

DEMOS & POSTERS B

Monday

System Demonstrations & Poster Presentations (B)

7:30 p.m.

System Demos:

- *Automated Dental Identification*: Ammar, Hany; Jain, Anil K.; Abdel-mottaleb, Mohamed
- *Argos: Dynamic Composition of Web Services for Goods Movement Analysis and Planning*: Ambite, José Luis; Giuliano, Genevieve; Gordon, Peter; Pan, Qisheng; Abbasi, Naqeeb; Wang, LanLan; Weathers, Matthew
- *Designing A Better Web Portal for Digital Government: A Web-mining Based Approach*: Fang, Xiao; Sheng, Olivia
- *Supporting Debates over Citizen Initiatives*: Kattamuri, Kishore; Silaghi, Marius; Kaner, Cem; Stansifer, Ryan; Zanker, Markus
- *Upper Level Set Scan Statistic System for Detecting Arbitrarily Shaped Hotspots for Digital Governance*: Patil, G. P.; Rathbun, S. L.; Acharya, R; Patankar, P; Modarres, Reza

Posters:

- *Agency Interoperation for Effective Data Mining in Border Control and Homeland Security Applications*: Adam, Nabil; Atluri, Vijaylakshmi; Koslowski, Rey; Janeja, Vandana; Warner, Janice; Paliwal, Aabhas Ω
- *Towards a Privacy Measurement Criterion for Voting Systems*: Coney, Lillian; Hall, Joseph L.; Vora, Poorvi L.; Wagner, David ◇

- *Modeling the Social and Technical Processes of Interorganizational Information Integration*: Dawes, Sharon; Cresswell, Anthony; Pardo, Theresa; Thompson, Fiona Ω
- *Evaluation of the GovStat Statistical Interactive Glossary: Implications for Just-in-Time Help*: Haas, Stephanie; Brown, Ron; Cao, Leo; Wilbur, Jesse ◇
- *Spatiotemporal Analysis of 9-1-1 Call Stream Data*: Hodgkiss, William ◇
- *ITR/IM+SII A Distributed Information Management Framework (REGNET) for Environmental Laws and Regulations*: Law, Kincho Ω
- *Style Conscious: How Members of Congress Learn New Ways to Communicate*: Lazer, David; Kevin Esterling, Michael Neblo ◇
- *Electronic Communication in a Geographically Dispersed Community of Forensic Scientists*: Mergel, Ines; Lazer, David; Binz-Scharf, Maria Christina ◇
- *Geoinformatic Surveillance of Hotspot Detection, Prioritization and Early Warning*: Patil, G. P.; Rathbun, S. L., Acharya, R.; Patankar, P.; Modarres, Reza Ω
- *Municipal E-Government and Equity*: Reece, Bryan
- *A Pilot Project in PAs to transit to an Open Source Solution*: Russo, Barbara; Sillitti, Alberto; Zuliani, Paolo; Succi, Giancarlo; Gasperi, Paolo
- *Scalable Data Collection Infrastructure for Digital Government Applications*: Samet, Hanan; Tanin, Egemen; Golubchik, Leana Ω
- *Integrated Criminal Justice Systems: Designing Effective Systems for Inter-organizational Action*: Sawyer, Steve; Tyworth, Michael ◇
- *Give the People What They Want: Research Notes From the Hunt for Better Electronic Rulemaking*: Shulman, Stuart; Shelley, Mack C. Δ
- *Digital Governance for Animal Health and Biosecurity Applications*: Wagner, Gale; Vedlitz, Arnie; Waghela, Surya Ω
- *A Framework for Analyzing Cross-Boundary e-Government Projects: The CapWIN Example*: Williams, Christine; Fedorowicz, Jane ◇
- *Improving the Quality of Public Services---Case Study of Shanghai Social Security and Citizen Services System*: Jiang, luquan; Zhang, Pengzhu; Wang, Huanchen ◇
- *National & Municipal Government Websites: A Comparison Between the United States and China*: Zhou, Quan ◇

KEYNOTE PANEL

Tuesday

Panel: Digital Government Research in the Academy

8:30 a.m.-10 a.m.

Panelists:

- Lynne Chronister, Associate Vice Chancellor for Research, University of California, Davis
- Jane Fountain, Professor, College of Social and Behavioral Sciences, and Director, National Center for Digital Government, University of Massachusetts, Amherst
- Judith Klavans, Director of Research, Center for Advanced Study of Language, College of Information Studies, University of Maryland
- Lois Delcambre, Professor, Computer Science Department, Portland State University
- Genevieve Giuliano, Professor, School of Policy, Planning and Development, and Director, METRANS Transportation Center, University of Southern California

Digital government research spans disciplinary fields that are exceptionally diverse. Although digital government research emerged primarily from efforts to engage computer scientists in research that would improve the functions of government, digital government research today addresses a far broader set of issues including the adoption and use of technology, impacts of

technology on government processes, and information and computer science challenges motivated in specific domains (e.g., health or environmental management).

Digital government represents perhaps an extreme in interdisciplinary research: the linking of computer sciences with social and policy sciences. In reality, however, most digital government research is discipline based. For example, computer scientists may develop new tools for managing or processing or transmitting data; policy scientists may analyze how organizations adapt to new data access structures or how new data access may influence public participation or political decisionmaking. Why is so little interdisciplinary research emerging in digital government? Are the differences between the fields simply too great, or are there institutional barriers that discourage truly innovative interdisciplinary research?

The purpose of this panel is to explore digital government research in the context of interdisciplinary research. Despite frequently stated goals of promoting interdisciplinary research, of promoting problem-oriented research, etc. on the part of university leaders, there are questions about the extent to which interdisciplinary research is valued and encouraged in the academy. This panel will examine the following issues.

- Faculty careers are driven by promotion and tenure decisions which are largely discipline-based. How is interdisciplinary research assessed in the tenure and promotion process? Is the promotion/tenure review process lagging behind changes in research and knowledge acquisition?
- Research quality assessment is based largely on peer review. Who are the peers for digital government research? How can digital government research be evaluated? Should a digital government researcher be expected to publish in disciplinary venues, publish in emerging digital government research venues, or both? Clearly digital government research can lead to disciplinary breakthroughs, but is that required?
- Interdisciplinary digital government research requires computer scientists to develop an understanding and associated expertise in application domains and, often, social science. Social science digital government researchers are asked to do the same. This requires a significant learning investment. Is it worth it? Is the future of digital government research interdisciplinary, multidisciplinary, or collaborative?
- To what extent is interdisciplinary work fostered in the academy? What are the tools for promoting interdisciplinary research: joint appointments? university seed research funds?
- There are many examples of fields that developed from the merging of disciplines, for example urban planning (public administration, architecture) or regional science (geography, economics). At what point does a field get recognized as legitimate? What roles do professional societies, scholarly journals, etc. play in establishing a new field?
- Digital government has the additional complexity of an applied component. Research is aimed at real world problem solving. Yet within the academy basic, theoretical research is typically more highly valued. Is there a place for applied research in the academy? Are the changes occurring within NSF (to more applied orientation) an indicator of changing values within the academy?

SESSION 4A

Tuesday

10:30 a.m.-11:30 a.m.

Invited Demonstration: IT at Work in U.S. Cities

- *Capital Wireless Integration Network (CapWIN): Building a Bridge in Transportation and Public Safety Communications* Ake, George S., Jr.

SESSION 4B

Tuesday

10:30 a.m.-11:30 a.m.

Technology Transfer and Evaluation for e-Government

- *Exploring the Success Factors of State Website Functionality: An Empirical Investigation:* Gil-García, Ramón Δ
- *US-European Union Collaboration on Digital Government Research: Developing New Models:* Cresswell, Anthony M.; Pardo, Theresa A.; Dawes, Sharon S. Ω
- *Multidisciplinary E-Government Research and Education as a Catalyst for Effective IT Transfer to Regional Governments:* Velez-Rivera, Bienvenido; Fernández-Sein, Rafael; Rodríguez-Martínez, Manuel; Rivera-Vega, Pedro I.; Díaz, Walter; Nuñez-Molina, Mario Ω

SESSION 4C

Tuesday

10:30 a.m.-11:30 a.m.

Health Care, IT and e-Government

- *Communication Technology and Urban Governance Reform:* Weare, Christopher Ω
- *Constructing Online deliberations among citizens, issue publics, and elites: The Healthcare Dialogue Project:* Price, Vincent Ω
- *A National Center of Excellence for Infectious Disease Informatics: Project Summary* Chen, Hsinchun; Zeng, Daniel; Tseng, Chunju; Larson, Catherine A.; Eidson, Millicent; Gotham, Ivan; Lynch, Cecil; Hu, Paul Ω

BOF SESSIONS/LUNCH

Tuesday

11:30 a.m.-1:30 p.m.

Birds-of-a-Feather Sessions

- *Cyberinfrastructure for Public Health:* Moderators - Contractor, Noshir; Leischow, Scott
- *Long-Term Management and Preservation of Digital Information:* Moderator - LeFurgy, William
- *Multiple Methods and Multiple Paradigms for Digital Government Research: Understanding the Promises and Challenges:* Moderators - Theresa Pardo and Ramón Gil-García
- *Digital Government, the Challenges of Integration and Interoperability:* Moderator - Scholl, Hans Jochen
- *Building New Curricula for Digital Government Studies:* Moderator - Shulman, Stuart
- *The National Infrastructure for Community Statistics:* Moderators: DeBerry, Marshall; Reamer, Andrew

SESSION 5A**Tuesday****e-Government and Community Information Systems****2:00 p.m.-3 p.m.**

- *Building Sustainable Community Information Systems: Lessons from a Digital Government Project*: Harrison, Theresa M.; Zappen, James Δ
- *SGER: Computer-Assisted Interpretation of Citizen Input in Rebuilding Lower Manhattan*: Kutz, Daniel; Mostafa, Javed; Girard, Monique; Stark, David Ω
- *Policy Made Public: New Technologies of Deliberation and Representation in Rebuilding Lower Manhattan*: Polletta, Francesca; Stark, David Ω

SESSION 5B**Tuesday****Invited Talk: Data Models and HCI for Integrating Government Statistics****2:00 p.m.-3 p.m.**

- *Human-Computer Interaction Themes in Digital Government: Web Site Comprehension and Statistics Visualization* : Shneiderman, Ben

Session 5C**Tuesday****Technology Evaluation and Medical Informatics****2:00 p.m.-3 p.m.**

- *A Real Option Analysis Approach to Evaluate Digital Government Investment*: Chen, Leon; Sheng, Olivia; Goreham, Dennis; Watanabe, Jeannie Δ
- *Automated Dental Identification*: Ammar, Hany; Jain, Anil K.; Abdel-mottaleb, Mohamed Ω
- *Emergency Medicine, Disease Surveillance, and Informatics*: Govindaraju, Venu Ω

SESSION 6A**Tuesday****Motivating and Enabling e-Government****3:30 p.m.-5 p.m.**

- *Electronic Democracy : An International Focus Group*: Norris, Donald F. Ω
- *Transnational Digital Government Research: Project Highlights*: Fortes, José Ω

SESSION 6B**Tuesday****User Interfaces for Integrating Web-based Information****3:30 p.m.-5 p.m.**

- *Quality Graphics for Federal Statistical Summaries: results*: MacEachren, Alan M.; Carr, Daniel; Scott, David Ω
- *Toward a Statistical Knowledge Network--2004-05*: Marchionini, Gary; Haas, Stephanie; Plaisant, Catherine; Shneiderman, Ben; Hert, Carol Ω
- *Evaluation and Evolution of a Browser and Search Interface: Relation Browser*: Zhang, Junliang; MacEachren, Alan M. Δ

SESSION 6C**Tuesday****3:30 p.m.-5 p.m.****e-Voting**

- *E-electoral Administration: Organizational Lessons Learned from the Deployment of E-voting in the UK:* Xenakis, Alexandros; Macintosh, Ann Δ
- *Voting, Vote Capture & Vote Counting Symposium:* Camp, L Jean; Bowman, Warigia; Friedman, Allan Ω
- *An Assessment of Voting Technology and Ballot Design:* Herrnson, Paul; Niemi, Richard; Bederson, Benjamin; Conrad, Frederick; Traugott, Michael Ω

KEYNOTE ADDRESS**Wednesday****8:30 a.m.-9:30 a.m.****Daniel Atkins, University of Michigan****"Cyberinfrastructure-enhanced Science and****Digital Government: Pathfinders and Fellow Travelers"**

Daniel E. Atkins is the Chair of the NSF Advisory Council on Cyberinfrastructure. He is a Professor in the School of Information and in the Department of Electrical and Computer Engineering at the University of Michigan (UM), Ann Arbor.

He began his research career in the area of computer architecture and did pioneering work in high-speed computer arithmetic and parallel computer architecture. He has served as Dean of the College of Engineering and more recently as the founding Dean of the School of Information at UM.

He is Director of the Alliance for Community Technology (ACT) an international partnership with philanthropy for research and development in the use of information and communication technology (ICT) to further the mission of educational and other non-profit organizations.

Abstract: The NSF community and other US and non-US science and engineering research funding agencies have recognized that ever more powerful, ubiquitous, and integrated information and communication technology now offers the potential to transform the conduct of scientific and engineering research and allied education. The platform for such transformation has been dubbed "cyberinfrastructure" (CI for short) and is the basis for cyberinfrastructure-enabled science, or e-science.

Cyberinfrastructure provides reliable services and knowledge on which to build specific instances of organizational forms called for example, collaboratories, grid communities, or community portals.

This talk will review the emergence and status of the "cyberinfrastructure movement" and draw parallels with the emergence of the field of digital government. It will suggest that there is complementary between these lines of endeavor, and that they stay in touch as pathfinders and fellow travelers into the broad application of advanced information technology to facilitate, or potentially revolutionize, complex and important human endeavor.

SESSION 7A**Wednesday Student Session**
10 a.m.-11:30 a.m.

- *Vertical Datum Conversion in the Lake Erie Coastal Area*: Zhou, Feng Δ
- *CRM in the Public Sector - Towards a conceptual research framework*: Schellong, Alexander Δ
- *Motivations for Implementing E-Government: An Investigation of the Global Phenomenon*: Stotzfus, Kimberly Δ

SESSION 7B**Wednesday Data Integration and Eco-Informatics**
10 a.m.-11:30 a.m.

- *Aligning Database Columns Using Mutual Information*: Pantel, Patrick; Philpot, Andrew; Hovy, Eduard Δ
- *BDEI-3: Eco-informatics and Decision Making*: Cushing, Judith Bayard; Wilson, Tyrone Ω
- *Harvesting Information to Sustain our Forests*: Delcambre, Lois; Nielsen, Marianne Lykke; Tolle, Timothy; Weaver, Mathew; Maier, David; Price, Susan Ω

SESSION 7C**Wednesday Data Quality and Data Mining**
10 a.m.-11:30 a.m.

- *Data Confidentiality, Data Quality and Data Integration for Federal Databases*: Karr, Alan F. Ω
- *Digitalization of Coastal Management and Decision Making Supported by Multi-Dimensional Geospatial Information and Analysis*: Li, Ron; Bedford, Keith; Shum, C.K.; Niu, Xutong; Zhou, Feng; Velissariou, Vasilias; Ramirez, J. Raul; and Zhang, Aidong Ω
- *Email Mining Toolkit Power Point Presentation*: Stolfo, Salvatore J.; Hershkop, Shlomo Ω

CLOSING**Wednesday Plenary Session**
11:40 a.m.-12:30 p.m.

- *The Case for Forming a Digital Government Society*: Arens, Yigal; Dawes, Sharon; Fountain, Jane; Delcambre, Lois; Giuliano, Genevieve

This final session will review conference activities with particular attention to the results of the first business meeting of the digital government society in formation. We will outline plans for setting up the society, electing its leadership, and more. We will also discuss plans for next year's conference, dg.o 2006.

TUTORIAL †**Wednesday**
1:30 p.m.-5 p.m.**Data Confidentiality and Statistical Disclosure
Limitation**

Presenter: Alan Karr, National Institute of Statistical Sciences

Federal statistical agencies must fulfill two nearly contradictory missions. On the one hand, they must extract and disseminate to other agencies, the research community and the public

useful information derived from sample surveys and censuses. But, they must also protect the confidentiality of the data and the privacy of data subjects. Protecting confidentiality may be mandated by law, prescribed by agency practices or promised to respondents. Often, confidentiality must be preserved in order to ensure the quality of the data: respondents do not answer truthfully if they believe that their privacy is threatened.

The tutorial is an overview of methods known collectively as statistical disclosure limitation (SDL) that attempt to resolve this contradiction.

The tutorial will introduce participants to fundamental problems and methods of SDL, the latter ranging from limiting access to data, to altering data prior to release, to releasing only the results of "safe" statistical analyses of the data.

In particular, the development of computing and statistical technologies and the emergence of the Internet as the principal mode for disseminating federal data both exacerbate the problems and offer new kinds of solutions. The tutorial will describe the problems, especially record linkage to external databases, as well as solutions such as analysis servers that account for the interactions among multiple queries on the same database.

No deep prior knowledge of data confidentiality, statistics or computer science will be assumed.

FIELD TRIP**Wednesday**
1:30 p.m.-5 p.m.**Georgia Transportation Management Center**

An Intelligent Transportation System (ITS) is the integration of technology, information processing and communication that leads to easier travel, increased safety and saved time and money.

In the late 1980's, Georgia began discussing the concept of ITS to maximize the efficiency of current and future transportation systems. Atlanta's winning bid for the 1996 Olympics caused an early start. By January 1996, the Transportation Management Center (TMC) was open. It became operational in April of 1996 marking the introduction of NAVIGATOR.

The Transportation Management Center (TMC) is the headquarters and information clearinghouse for NAVIGATOR, operating 24 hours a day, 365 days a year.

† Tutorials and workshops are open only to those who pre-registered for them

TMC employees work behind the scenes to provide statewide incident management through a three phase process:

- Phase 1: Collecting Information The TMC monitors the roadways and collects real-time information from Video Detection System (VDS) cameras along the interstates. Operators also gather information taking *DOT calls from travelers regarding traffic congestion and roadway incidents.
- Phase 2: Confirm and Analyze Information TMC employees must then confirm each incident by identifying the problem, the cause and the effect it will have on the roadway. The proper authorities, such as police, fire or HERO, are notified so they can respond to the incident.
- Phase 3: Communicate the Information The third step is communicating this information to travelers, allowing them to make informed travel decisions, through changeable message signs (CMS) on the roadways, the NAVIGATOR website and media relations.