

## **Michael J. Chumer**

### **Curriculum Vitae**

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University Heights  
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### **Major Accomplishments:**

Established Homeland Security Education partnerships with the Naval Postgraduate School (NPS) and the DHS as well as the NORAD/Northcom Homeland Security Defense Education Consortium (HSDEC). Assisted in developing the Interdisciplinary Program in Emergency Management and Business Continuity. In the process of developing a MS and Executive MS in HLS based upon the very successful NPS model at NJIT.

Refined and re-defined system analysis and design techniques during the 1970s in the development of enterprise-wide cost accounting information systems. This included functional decomposition of business processes, logic modeling and data base design.

Developed user based diffusion processes during the 1980s that resulted in the implementation of clinical based pharmaceutical information systems and trader/broker stock and bond trading systems.

Created the International Office Technologies Association and directed the effort of 20 Fortune 500 companies in the diffusion and integration of Office Information Technologies during the period of time from 1988 - 1991.

Integrated users (students and library staff) collaboratively in the development of web based virtual exhibits using storyboarding techniques and multi media “object” creation and integration. This resulted in the completion of major web sites in the Rutgers “Jazz Greats” initiative.

Co-developed a gaming/training simulation using elements of the Delphi method. This is a work in progress and is being done in order to train Emergency Preparedness personnel in developing effective Emergency Response scenarios. The simulation uses computer mediated communication technologies, asynchronously, to develop both threat and defense plans.

Designed and developed one of the first hybrid courses at NJIT. Delivered the course and am in the processing of analyzing the effectiveness of the Hybrid using learning styles (Felder-Solomon) as independent or predictor variables.

**Education:**

2002 Ph.D. Communication and Information Science, Rutgers University, School of Communication, Information, and Library Science (SCILS).

1970-MS Information and Computer Science- Georgia Institute of Technology

1964-BS Marine Engineering-US Naval Academy

1960 Perth Amboy HS

**Research Interests:**

**Homeland Security** - Developing education and training programs that further the mission of Homeland security within the United States. Researching preparedness and the use of virtual technologies in the development of training scenarios for first responders and command center operations.

**Command and Control** - Framing Command and Control (C2) as process, function, and organization in order to develop specific research foci in each area. Currently starting a collaboration with the Port Authority NY/NJ to investigate C2 situational awareness and social networking developed during collaborative command center operations.

**Socio-technical and social informatics** - inquiring into the symbiotic relations that develop as a result of IT/IS diffusions and the value of emerging technical/social relationships and interactions.

**Emergency Response Management Information Systems (ERMIS)** - identifying and integrating the design components specifically command and control into a cohesive and useable technology. Investigating assurance of an ERMIS. Assisting in the development of “gaming and simulation technologies” to both train first responders and develop user requirements for an ERMIS.

**Techno-pedagogy** - investigating the factors that enable both learning and teaching to include the interaction between technology, pedagogy and content in collaborative learning environments.

**Critical Information Systems** - The identification and use of critical theories as research approaches in understanding the formative bases of IS as well as the “politics” of IS use.

**Experience:**

**NJIT, Industry Liaison** - In addition to faculty duties am responsible for interfacing with public, private, and military organizations in Homeland Security and Emergency Management initiatives.

**NJIT, Information Systems Department** - As part of the IS faculty design and conduct courses at the graduate and undergraduate levels that cover a wide spectrum of IS/IT and Computer Science. The IS Department’s nominee for the Teaching Excellence Award in 2003, 2004,2005, and 2006.

**Director of Media, Digital, and Technical Services, Dana Library, Rutgers University Campus in Newark (1998 - 2002).** Responsible for all multi-media operations as well as the planning for a Center of Instructional Information Technologies. A key figure in the selection, installation, research and use of instructional information technologies in education scenarios on the Newark campus.

**Collaborated with the Rutgers University Center for Mathematics, Science, and Computer Education** in their educational outreach programs for K-12 teachers in various New Jersey school districts. Assisted the Center by conducting several video conference programs as part of The Education and Sports Alliance (TESA) program for students in grades K-12.

**Adjunct Faculty Fairleigh Dickinson University (1979-1987)** - Taught ~ 4000 adults in the use of the PC as well as PC software. Helped to start the Center for Information System Technology within FDU continuing education and as part of that venture developed and delivered Executive Briefings (1 day programs) that consisted of the following:

- Distributed Computing
- Knowledge Networking (the power of telecommunications)
- Securing Corporate Data

I taught data processing and information system analysis and design courses to adults entering the Certificate Business Administration program. After this I worked closely with the Director of Continuing Education in developing a personal computer training lab and as part of the lab taught adults in basic computer skills and PC software use.

### **CONSULTANT IS/IT Systems (1984 -1996)**

Examples of consulting assignments and accomplishments:

**- HANOVER/AMGRO INSURANCE CO.-** Determined the feasibility of using information technology to explore new business opportunities. Concluded significant upgrading was required both in the technology and people skills required to use technology. Recommended the organization consolidate existing LOBs rather than expand into areas of considerable risk. The P&L models generated by the study supported the consolidation effort. Saved the organization \$2.5 million dollars in capital expenditures.

**- MORRISTOWN MEMORIAL HOSPITAL-** Advised the CEO of Morristown Memorial Hospital in the identification of computer service consultants. The guidance provided assisted in identifying a technology consulting service which would develop a technology plan for the hospital and manage the plan's implementation.

**- SANWA-BGK-** The problem was trader and broker productivity in a firm that

is primary dealers in the treasury market. The basic information technology architecture was developed and implemented for both the front office trading system and back office processing system. The new trading system made each broker and dealer more productive which resulted in annual profit increases of between 20%-30%.

- **RICHARDSON-VICKS** - Investigated if existing information technology could support the administrative requirements of several new lines of business as well as coexist with the technology direction of the parent company Proctor & Gamble. Recommended that the technology direction should change and align itself with that of the parent company. The recommendation was implemented which made it easy for Richardson-Vicks to be assimilated into the technology culture of Proctor & Gamble.

- **GIBRALTAR SECURITIES**- Old office technology was causing sales activity to be less than expected. Developed and implemented an office technologies infrastructure in support of all sales and brokerage activities. Once implemented the new technology caused sales activities for the firm to increase between 15%-25%. Similar increases in productivity also occurred.

- **THE BOC GROUP**- Recording of drug stability data was done manually causing errors in the compilation of stability information. Designed, developed and implemented a PC based drug stability system. The system reduced errors and increased the organization's ability to compile accurate data for reporting purposes.

- **LASER RECORDING SYSTEMS INC.**- No sales or marketing plan existed to introduce new technology required in speeding up the NDA (New Drug Application) process. Worked with senior management to develop the marketing and sales plan to introduce optical disk technology submissions of NDAs. This technology is now being used as a standard by many pharmaceutical firms.

- **IOTA**- Started a non-profit organization which coordinated the effort of over 20 Fortune 500 companies during a three year period resulting in the identification of common issues, concerns and areas of opportunity due to introducing and implementing information technologies. The relevance of technologies of the future was investigated. The by product of this effort was the development of a working model of the "Office of the Future" as well as a white paper entitled, "The Relation Between Office, White Collar Productivity, Business Transformation, and Issues of Infrastructure".

- **American Management Association**- Lectured on Information Technology and Data Communication for several 3 day management programs.

**District Manager AT&T Longlines (1976 - 1984)** - Large scale project

management in the area of Information System Analysis and Design. Responsible for the implementation of very large scale cost accounting and billing information systems. 4 major systems were implemented using structured information analysis and design methodologies that were state of the art techniques during this time. Refined these techniques during actual use.

**Data Center Director(1974 -1976)** Burns & Roe, architects and designers of Nuclear Power plants. Responsible for information system design and development as well as data center operations.

**United States Marine Corps (1974 - 1984 Reserves, 1964 - 1974 Active Duty)**

Data Systems Engineer - assisted the USMC in developing a world wide Marine Corps recruiting information system as well as a satellite based battlefield communication system. This effort was part time and performed in order to fulfill Reserve requirements for retirement.

Served in the capacity of Information Systems and Programming Director and Assistant Data Center Director for a 175 person USMC Data Center on Okinawa, Japan, responsible for all of the computerized processing required to support Marine Corps activities in the Western Pacific Theatre of Operations. In addition I served as the consulting interface to the Chinese Marines located on Taiwan as they were re-designing their information systems within the personnel, logistics, and maintenance functions.

**Teaching:**

**Courses Developed:**

Command and Control Systems, (F2F, Hybrid, D/L) (G and U) 2007

Multimedia Information Systems, (Hybrid) 2005 NJIT (U)

Artificial Intelligence, (F2F) and (D/L) 2002 NJIT (U)

Natural Language Processing, NJIT 2002 (G)

Management Information Systems, RUTGERS (G) 1996

Database Management Systems, RUTGERS (G) 1996

Computer and Information Systems, Fairleigh Dickinson(G and U) 1979

Systems Analysis and Design, University of Southern California (U) 1974

Introduction to Data processing, University of Southern California (U)1974

**Programs Developed:**

Inter-disciplinary Program in Emergency management, Business Continuity, and Homeland Security (2007 ongoing)

Information System Strategies, American Management Association, 1985 (3 days)

Fairleigh Dickinson University Adult Education (1979-1985) 12 hour programs:

Introduction to PCs (30 programs given)

Introduction to Databases (15 programs)

Introduction to BASIC (8 programs)

Advanced BASIC (8 programs)  
Introduction to Wordprocessing (5 programs)  
Introduction to Spreadsheets (visical/Lotus 123) 4 programs  
MS and PC DOS (6 programs)  
The Apple Macintosh Operating System (4 programs)  
Microsoft Windows (6 programs)

### **Courses Taught (1973 to present):**

#### **NJIT(2002-present):**

Multimedia Information Systems, (F2F, DL, Hybrid)  
Artificial Intelligence, (F2F) and (D/L)  
Natural Language Processing  
Information System Principles  
Database Management Systems  
Systems Analysis and Design  
Introduction to IT  
IT visualization

#### **Rutgers (1996-2002)**

Management Information Systems  
Database Management Systems  
Introduction to Communication

#### **Fairleigh Dickinson University (1978 -1979)**

Computer and Information Systems (Business certificate program)

#### **University of Southern California (1971-1973)**

Systems Analysis and Design  
Introduction to Data Processing

### **Memberships (current and former)**

Academy of Management (AOM)  
American Library Association (ALA)  
American Society of Information Science and Technology (ASIST)  
American Management Association (AMA)  
Association of Computing Machinery(ACM)  
Association for Information Systems (AIS)  
IEEE  
New Jersey Communication Association  
Society of Competitive Intelligence Professionals (SCIP)  
Special Library Association (SLA)

### **Certifications, Awards, Honors and Listings**

Lifetime Professional Certification/Credential issued by the California  
Community College Board of Directors to Instruct Computer Science and

Computer related technologies, certification number 33329 issued July 10, 1972

IS Department Nominee for the University Teaching Excellence Award 2004 and 2005 (two years in a row)

Purple Heart Medal for wounds received in combat action in Vietnam.

## **Scholarly Activities**

### **Books**

Prichard, Hull, Chumer, and Willmott "Managing Knowledge: Critical investigations on work and learning" , Macmillan(2000)

### **Book Chapters**

Chumer, MJ "The Self Ethnography as a "Critical" Research Approach" to be published as a chapter in "Critical Perspectives on Information Systems" Brooke, 2007 (Sage).

Chumer, M., Hull, R., and Prichard, C. (2000). "Introduction: situating discussions about knowledge". In Prichard, C., Hull, R., Chumer, M. and Willmott, H ( Eds.) Managing Knowledge, London: Macmillan.

### **Articles (Refereed)**

Chumer, MJ "Homeland security technology - Visualization and Geographical Information Systems" to be published in NJ Commerce Fall 2007

Chumer, MJ "Business Continuity - Survivability of the Internet" to be published in NJ Commerce Fall 2007

Turoff, Chumer, Van de Walle, Yao The Design of Emergency Response Management Information Systems (ERMIS) , Annual Review of Communication, International Engineering Consortium, Vol 58, Fall 2005

Turoff, Chumer, Hiltz, Alles, Kogan, Vasarhelyi "Assuring Homeland Security: Continuous Monitoring, Control & Assurance of Emergency Preparedness", prepublication for Special Edition on Emergency Management Information Systems in the Journal of Information Technology Theory and Application,(2005)

Turoff, Chumer, Van de Walle, Yao The Design of Emergency Response Management Information Systems (ERMIS), Journal of Information Technology Theory and Application, May 2004 ( to be also reprinted by the IEEE as part of a volume containing the best engineering communication papers of 2004)

Chumer, M.. "Countering the Moses effect: The role of critical scholarship in Knowledge Management" (CMSW online(Nov. 1999))

### **Conference Proceedings (Refereed)**

Chumer MJ, and Turoff, M, "Command and Control (C2): Adapting the Distributed Military Model for Emergency Response and Emergency Management" ISCRAM, May 2006

Turoff M, Chumer, M and Hiltz, R. "Emergency Planning as a continuous game" ISCRAM, May 2006

Yao, Konopka, Hendela, Chumer, Turoff, "Unleash Physical Limitations: Virtual Emergency Preparedness Simulation Training, Methodology and a Case Study" AMCIS Conference (2005)

Chumer and Scher, "Hybrid course development and assessment" NJEDGE Conference on Best Faculty Practices" (March 2005)

Kaghan and Chumer, "Virtuality and the Generalized Other" Conference paper delivered at the Critical Management Conference, University of Cambridge, UK (July 2005)

Chumer, MJ "The Self Ethnography as a "Critical" Research Approach" paper delivered at the Academy of Management Conference, Seattle Washington, (August, 2003)

Chumer, MJ " Situating Discussions Around Knowledge" ASIS&T Conference Chicago, (2000)

Rice, Collins-Jarvis, Lehr, Zydney-Walker, and Chumer "The Use of Multiple Theories, Data, and Methods in Assessing the Implementation, Use, and Evaluation of an Organization Information System" paper delivered in the Organizational Behavior Track, Eastern Academy of Management (1997)

Chumer, MJ" The Relation Between Office, White Collar Productivity, Business Transformation, and Issues of Infrastructure" paper given at the annual conference of the International Office Technologies Association (IOTA), Rye , NY (1990).

Chumer, MJ(ed.) "Office Technology Infrastructure", Conference Proceedings of IOTA, Rye, NY (1990)

Chumer, MJ (ed.) "Office Technology Issues", Conference Proceedings of IOTA Florham Park, NJ (1989)

Chumer, MJ(ed.) "Distributed Computing" Conference Proceedings Center for Information Systems and Technology, Fairleigh Dickinson University (1987)

Chumer, MJ(ed.) "Securing Corporate Data" Conference Proceedings Center

for Information Systems and Technology, Fairleigh Dickinson University (1987)

Chumer, MJ(ed.) "Knowledge Networking" Conference Proceedings Center for Information Systems and Technology, Fairleigh Dickinson University (1986)

**Publications (other)**

Chumer, MJ "Towards an Understanding of User - Centeredness Within Information Technology Diffusion: A Self Ethnography" Published Thesis (April 2002)

**Other**

Senior Faculty of the State of NJ Preparedness College (2007)

Member of the Highlands Forum a DOD think tank advising the Assistant Secretary of Defense for Networks and Information Integration.(2006)

Stream convener, Command and Control, ISCRAM conference, May (2006)

Stream convener, Developing Management Knowledge, Critical Management Studies Conference II, Manchester University, UK (1999)

Stream convener, Knowledge Management Stream, Critical Management Studies Conference 1, Manchester University, UK (1997)

**Selected Other Professional Presentations**

Panelist and Facilitator NJ-BENS (Business Executives for National Security) Symposium -"Survivability of the Internet" to be held Feb. 2007

Panelist "New Jersey Universities Homeland Security Research Consortium" for 2 panels, Port Security and Planning for Emergency response.

Panelist "New Jersey Universities Homeland Security Research Consortium" Adaptability of the distributed military command and control model to emergency response" NJIT November, 2005

Panelist "Knowledge Management Theory" ASIST Conference Chicago, 2000

Panelist "Wired for Business" Caucus NJ Television Documentary, 1999

Panelist "Tactical and Strategic Competitive Intelligence" Society of Competitive Intelligence Professionals (SCIP) Conference Piscataway NJ 1996

**Numerous others (partial list):**

Allied Signal

AT&T

Eastman Kodak

Exxon/Mobile  
GTE  
IBM  
Naval Postgraduate School  
NORAD/Northcom  
Pfizer  
Prudential  
Richardson Vicks  
Ryan Financial Strategies  
Schering Plough  
The BOC Group  
Warner Lambert

### **Grants Awarded**

**Visualization for a Common Operating Picture (COP) (PI)** - A Homeland Security Defense Education Consortium (HSDEC) research project sponsored in part by NORAD/Northcom to investigate the role played by GIS in Command and Control (C2) scenarios. (2007)

**Support to a National Homeland Security Exercise Program (PI)** - A Homeland Security Defense Education Consortium (HSDEC) research project sponsored in part by NORAD/Northcom to investigate exercise coordination and collaboration issues between the DOD and Civil authorities.. (2007)

**Unmanned Aerial Vehicle Project Phase 2 (PI)**- Integration of physics based UAV and weaponized “objects” into the US Army’s distributed simulation environment. ARDEC at Picatinny Arsenal and Prologic as sub - contractor (2007 - 2008) \$450k

**Unmanned Aerial Vehicle Project Phase I (PI)** - UAV modeling and simulation project for Homeland Defense scenarios with ARDEC at Picatinny Arsenal and Prologic as sub - contractor (2006 - 2007) \$400k.

**Hybrid Course Development and Assessment** (Multimedia Information Systems) 2004-2005 Internal NJIT funding.

**Metro-math (Project Consultant) NSF Center of Math Teaching Excellence** consisting of Rutgers, Univ. of Pennsylvania, and CUNY (2004 - Present (\$10,000 K))

**Communication Deception (Project Consultant)** Rutgers SCILS New Brunswick (2003-present) combined DARPA and NSF (\$2,000K)

**“Digital Library Initiative”** Rutgers Dana Library (1998-2002) CO-PI - Investigated meta data standards and user web interfaces to Library oriented web portals.(\$100K)

**“Educational Technology Video Server and Video Streaming”** Rutgers Dana Library (1998-2002) CO-PI - Developed multimedia lab to investigate video streaming and the development of other rich text objects. Investigated the pedagogical use of interactive video conferencing (\$150K)

**“Studying the value of information services in special libraries and information centers”** APlab-SCILS Rutgers (1996-1998) - Research assistant and coordinator of data collection and analysis.(\$500K)

## **Service and Committees**

### **NJIT**

Industry Liaison for Homeland Security program offerings  
Library Faculty Committee  
MSIS Graduate Curriculum Development Committee

### **RUTGERS**

Technical Service Council (one of 3 standing Rutgers University Library Committees focusing on strategy development).  
Chair, meta data standards and library portal committee

### **Fairleigh Dickinson University**

Director, Center for Information Systems and Technology, Fairleigh Dickinson University, 1985-1988

### **Other:**

Book reviewer for the Journal of Technology and Science. (1998- present)

Assistant Editor “Information Processing and Management” A professional journal 1996-1998

Director, International Office Technologies Association, 1988-1991