



# NJIT Faculty Meeting

Wednesday - December 8, 2010  
Campus Center Ballroom  
2:30 - 4:00 p.m.

- I. Convening of Meeting**
- II. Approval of Minutes of October 27, 2010 Meeting**
- III. Faculty Council Chair Report – Ali N. Akansu**  
(5 mins)

III. Faculty Council Chair Report – Ali N. Akansu

**NJIT Faculty Council AY2010-11**

**Guiding Principles**

- Privilege to serve NJIT Students & Faculty
- Improved communications among Students, Faculty & Administration
- Faculty Engagement & Governance
- Practicing and Promoting Integrity, Collegiality, Transparency, Meritocracy, Competitiveness, & Quality Growth

### III. Faculty Council Chair Report – Ali N. Akansu

## NJIT Faculty Council AY2010-11

### Goals

- Faculty Handbook Improvements
- Bridging Students, Faculty and Administration for better Academic Quality & Reputation
- Faculty Committee to Improve Student Retention
- Facilitating for Faculty & Administration Driven Initiatives (e.g., Undergraduate Research Experience, University Committee on Evaluations, Self-Assessment & Rankings)

III. Faculty Council Chair Report – Ali N. Akansu

NJIT Faculty Council AY2010-11

Announcement on Future Voting Procedure

All future motions recommended by the Council on **Faculty Handbook Revisions** will be embedded with **Mail Paper Ballot** as voting modality compliant with the current Handbook and practices in order to improve Faculty participation in major decisions. Other motions will be voted as before.

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- IV. Motion Regarding Course Evaluations (Priscilla Nelson) (10 min)**

A motion is made that

1) The faculty of NJIT commit to the continued use of On-Line Course Evaluations for the two year period extending from Spring 2011 through Fall 2012 semesters (the Fall 2010 semester will receive on-line Course Evaluations by a previous vote of the faculty). Use of On-line Course Evaluations beyond the Fall 2012 semester would require an additional vote by the faculty during or before the end of Fall 2012 semester.

2) A standing Committee on Course Evaluations be established immediately with the charge to:

a. conduct analysis of the Course Evaluation results from each semester that will lead to continuous improvement in the process and evaluation content; and

b. report to the Faculty Council each semester regarding the conclusions of the analysis, and prepare recommendations for improvements. The report of the Committee will also be presented to the meeting of the faculty once a semester.

The committee will be appointed by Faculty Council, be chaired by a member of the Faculty Council, and the committee membership will be comprised of one faculty member from each academic college (CSLA, CCS, NCE and CoAD) and the School of Management. The committee membership will also include the Director of Institutional Research and Planning as an ex officio member.

3) The Faculty Council consider the recommendations of the Committee on Course Evaluations, and prepare motions for consideration by the faculty that will lead to improvements in the process and evaluation.

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## **V. Course Scheduling Procedures** (5min)

- Richard Sher

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# Proposal for new MS degree

## MS in Cyber Security and Privacy (MSCSP)

***Reza Curtmola***

*Assistant Professor, Department of Computer Science*

NJIT Faculty Meeting  
December 8, 2010



# Cyber Security

- What is?
  - Cyber security involves protecting the information and systems we rely on every day (home, work, school, strategic infrastructure, etc.)
- Why is it important?
  - Many critical industries rely on computer networks
  - Large amounts of sensitive data need to be managed
  - Growing number and sophistication of cyber attacks
  - Growing software complexity
  - Citizens are concerned about their privacy

# Rationale for a new program

- Increasing demand for a workforce skilled in cyber security
  - Both government and private sector
    - E.g., DHS is looking to hire 1000 cybersecurity specialists

# Job examples

- Employers prefer applicants with an MS degree for:
  - Information Security Engineer
  - Network Security Engineer
  - Systems and Software Security Engineer
  - Security Analyst
  - Computer/Network Security Consultant
  - Computer Security Specialist

(job titles from advertised openings at Google, Symantec, Cisco, AT&T, Lockheed Martin, Northrop Grumman, Raytheon, etc.)

# Objectives

- Create a strong foundation and detailed technical knowledge in security, privacy/anonymity, and cryptography applied to:
  - Computer systems
  - Computer networks
  - Web applications
- Besides technical aspects, include legal, policy, and ethical aspects of security and privacy
- Graduates of the program:
  - Will have in-depth knowledge of security mechanisms, standards, state-of-the-art capabilities
  - Will be able to design new system and infrastructure security solutions

# Relationship to NJIT MS programs

- MS in IT Administration and Security
  - Focus on administration aspects
    - Looks at security from an IT administration point of view
  - Jobs: network, system, database administrators
- New MS in Security in Privacy program
  - Focus on design and development of techniques to defend against current and future security and privacy threats
  - Jobs: security specialist (engineers, analysts, or consultants in the security of systems, networks, information and software)

# Relationship to other similar

- State and Region: **programs**
  - No similar program by a public university
  - Two programs at private universities:
    - Stevens Institute of Technology
    - Polytechnic Institute of New York University
- Nationwide:
  - Johns Hopkins University
  - Indiana University
  - Carnegie Mellon University
  - Purdue University
  - George Mason University

# MSCSP: potential students

- Undergraduates at NJIT
- Undergraduates at other institutions in state and region
- Working professionals in the NJ-NY area
- Foreign students
- Expected enrollment of 20 in first year, growing to 60-80 over the next four years

# Resources to support the program

- **New courses need to be developed:**
  - CS 6xx - Security and Privacy in Computer Systems
  - CS 6xx - Network Protocols Security
  - CS 6xx - Counter-Hacking Techniques
- **Two courses already developed:**
  - CS 708 - Advanced Data Security and Privacy
  - CS 755 / ECE 782 - Security and Privacy in Wireless Networks

# Resources to support the program

- Faculty Advisory Committee:
  - Reza Curtmola (Security and Cryptography)
  - Dennis Karvelas (Networking and Security)
  - Boris Verkhovsky (Security and Cryptography)
  - Grace Wang (Networking and Security)
  - Cristian Borcea (Networking and Distributed Systems)
- Administrative Staff:
  - Kathleen Price (MS Advisor)
- CS faculty will handle the majority of coursework, complemented by faculty from IS, IT, ECE, MGMT
- Laboratory:
  - Center for Information Protection (CIP) provides a laboratory with a network of computers that can be used for educational purposes

# Credits & graduation options

- **30 credits are required**, which can be satisfied as either one of the following options:
  - Courses (30 credits)
  - Courses (27 credits) + MS Project (3 credits)
  - Courses (24 credits) + MS Thesis (6 credits)

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# MS Web Systems Proposal

Michael Bieber  
Associate Chair, Information Systems Dept.

December 8, 2010

# Why New Web Focus for IS

- Web is expanding very rapidly
  - Web 1.0: Viewing information
  - Web 2.0: Collaboration & Social Networking
  - Web 3.0: Semantic (Intelligent) Web
  - Mobile Web (e.g., smart phones)
- Web is essential for every organization's internal & external operations

## Why New Web Focus, cont.

- Web is a huge opportunity for IS and NJIT
  - Web systems are information systems
  - Web resonates with potential applicants
  - Web focus positions us to become a leader in Web education and research nationally
  - Attract more quality students
  - Positions for future growth

# Why a New Degree?

- Growing need for Web experts
- Rapidly expanding job opportunities
  - Web application development, data analysis, security...
- Demand from students
- No existing degree (nationally)

**FIRST MOVER ADVANTAGE!**

# What Will MS WS Grads Learn?

- Specify, design & build Web systems
- Mine and analyze Web data
- Handle customer relationships through the Web
- Manage Web security
- Make Web-related business & technical decisions
- Help improve companies' operations (internal and external)

# What Kind of Jobs?

- Web Administrator
- E-commerce Specialist
- Web Application Architect / Engineer / Developer / Manager
- Software Engineer – Web/Mobile Applications
- (Java) Web Developer
- Requirements Developer
- Web Analyst
- Web Analytics Consultant / Specialist / Manager

# 6 Core Courses

NEW

- IS 6xx Web-based Information Management
- IS 6xx Web Programming
- IS 6xx Web Customer Relationship Management: Tools & Techniques
- IS 631 Enterprise Database Management
- IS 688 Web Mining & Analytics
- CS 6xx Security & Privacy in Computer Systems (*in development*)

# Sample Electives (4 needed)

NEW

- IS 6xx Recommender Systems
- IS 6xx Semantic Web
- IS 634 Information Retrieval
- IS 687 Transaction Mining & Fraud Detection
- IS 663 System Analysis and Design
- IS 676 Requirements Engineering
- CS 643 Cloud Computing
- PTC 629 Practice & Theory of Social Networks

# Web Expertise in IS Department

- Currently 2 faculty with Web development expertise
  - Min Song & Brook Wu
- Plan to replace leaving faculty with Web experts (subject to NJIT approval)

# A Key Technologist

Dr. Philip Neches

- Founder, Teradata
  - Chair, Foundation Ventures
  - Caltech Board of Trustees
  - CCS Advisory Board
- 

**From:** Philip M Neches [pmneches@caltech.edu]  
**Sent:** Friday, October 01, 2010 2:53 PM  
**To:** Gehani, Narain

cont...

# What a Key Technologist Thinks

Narain,

Thank you for sending the proposal and for the lively and constructive meeting earlier this week. The MSWS program appears to be a first, not just for NJIT, but for academia. That should be a major part of publicizing and promoting the program. It would also make sense to have a "mid term" review of the program to incorporate the kind of invaluable experience that the "first mover" gets in abundance. Great work, and best success with this exciting project!

Dr. Philip M. Neches

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**VIII. Report from the Provost** (10 min)  
– Ian Gatley

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– Robert Altenkirch

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- X. Old Business (Initiated during AY2009-10 or earlier): (about 15 min)**

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**Updates on Council Work-in-Progress:**

- Teaching Assignment Process (TAP) –  
Status (Marino Xanthos / Ali Akansu)

## TAP Status

- TAP expired without all objectives achieved
- Transparent & Fair workload allocation among Faculty is the main goal of TAP
- Faculty Council will bring a new TAP-like initiative during Spring'11 for Faculty approval and more successful implementation

**X. Old Business (Initiated during AY2009-10 or earlier):** (about 15 min)

**Updates on Council Work-in-Progress:**

**Section 2.4 – Departmental Chair Appointment Procedures (mail paper ballot based voting process to be started at Feb. 16, 2011 Faculty meeting) - (Maurie Cohen / Ali Akansu)**

**X. Old Business (Initiated during AY2009-10 or earlier): (about 15 min)**

**Section 2.4 – Departmental Chair Appointment Procedures –  
Maurie Cohen / Ali N. Akansu**

Never appoint acting chieftains. Put the most capable Hun in charge, give him / her both responsibility and authority, then hold him / her accountable.

Wess Roberts, Leadership Secrets of Attila the Hun. Business Plus, 1990.

X. Old Business (Initiated during AY2009-10 or earlier): (about 15 min)

Section 2.4 – Departmental Chair Appointment Procedures –  
Maurie Cohen / Ali N. Akansu

- Currently, there are a number of Academic School, Departments & Programs at NJIT administered by Acting & Interim Administrators. This fact might severely jeopardize their upcoming program Accreditations according to the President and the Provost
- Cooperation of NJIT Faculty & Administration is the only way to overcome this state of emergency
- **We do not have any other option but to resolve this problem** at every single Academic unit as soon as possible for a **Better NJIT**
- Faculty Council members have been diligently working on Section 2.4 of Handbook for improvements. It will be brought before the Faculty for approval in Feb'11

# Proposal for Chair Selection Process

Mill Jonakait  
Maurie Cohen, Chair  
Dale Gary  
Ali Akansu

# Why Address the Chair Selection Process?

- Middle States requirement that we amend our Handbook.
- Two-thirds majority requirement has too often prevented a department's ability to agree on a chair.

# What We Have Done

- Looked at procedures from other universities
- Presented to:
  - Faculty information sessions
  - Deans and Provost
  - Departments currently without permanent chairs
  - Distinguished Professors

# **The Draft Proposal** **(Your Feedback Welcome!)**

# Term of Department Chairs

- The term of a sitting chair will be three years. Thus, the process of selecting a department chair will occur every three years after a chair's initial appointment.
- This provision does not preclude a chair's having multiple terms or department's selecting chairs on a rotational basis.

# Voting Eligibility

- Tenured and tenure-track faculty are eligible to vote.
- Members of the department who hold appointments in the administration (e.g., Deans, Associate Deans, Provost, President) will not be eligible to vote.

## **Faculty Council Elections Coordinator**

- A new position, the Faculty Council Elections Coordinator (FCEC), will be established to administer the election process in accordance with best practices set of procedures.
- The FCEC will circulate within the department a list of faculty who are eligible to be chair (i.e., tenured associate and full professors including the sitting chair).
- Those faculty who do not wish to be considered will notify the FCEC in writing and they will be dropped from the ballot.

# Who Wins?

- For a winner to be determined, one candidate will need to receive a majority of the eligible votes.
- Should any candidate fail to win a majority vote, a subsequent run-off election between the two top vote-securing candidates will be conducted by the FCEC.
- Name of the winner is forwarded to the Dean for appointment.

# Reappointment of Current Chairs

Current department chairs can be elected to a subsequent consecutive three-year term by receiving a 2/3 majority of eligible votes and then being reappointed by the Dean.

## For Outside Search

- The department will select a search committee of 3-5 people from among the tenured and tenure-track faculty. The search committee may include faculty from other departments if the department wishes it.
- The Dean will charge the committee and will interview all candidates.

## **For Outside Search (con't)**

- Once the voting members of the department have made their final decision, the Dean will be provided with a ranked list of candidates so that he/she can make a final decision.
- As above, members of the department who hold appointments in the administration will not be eligible to vote.

## **For Outside Search (con't)**

- The name of the candidate with the majority vote will be forwarded to the Dean. In the case of a tie, the Dean will make the final decision.

**X. Old Business (Initiated during AY2009-10 or earlier):** (about 15 min)

**Updates on Council Work-in-Progress:**

Evaluation of Senior Administrators  
(President, Provost, Vice Presidents), Deans,  
Associate Deans and Associate Chairpersons  
of Departments (mail paper ballot based  
voting process to be started at Feb. 16, 2011  
Faculty meeting) – (Michael Bieber)

## 2.5.2 Evaluation of Senior Administrators

Changes

- Also includes President and Associate Deans
- Administrators do not receive own evaluations.
- Supervisors receive evaluations of those serving under them.
- Faculty Council Chair responsible for transmitting results.

Recipient	Results Transmitted
Chair of Board of Trustees	President, Provost, Senior Vice Presidents, Vice Presidents
President	Provost, Associate Provost, Senior Vice Presidents, Vice Presidents, Deans, Associate Deans, Chairpersons
Provost	Associate Provost, Deans, Associate Deans, Chairpersons
Deans	Associate Deans, Chairpersons

## **2.5.2 Evaluation of Senior Administrators (President, Provost, Senior Vice Presidents, Vice Presidents), Deans, Associate Deans, and Chairpersons**

The objective of this evaluation is to provide feedback on how NJIT faculty perceive administrators' effectiveness in performing their duties and responsibilities towards advancing the university's missions. This evaluation will be conducted at least once every three years by the Office of Institutional Research and Planning (IRP). An *ad hoc* Faculty Council committee will work with IRP and oversee the process. The Council, after consultation with the President, may also evaluate the performance of other administrative officers whose work impacts academic affairs.

To obtain candid evaluations from faculty, evaluations must be anonymous. No member of Faculty Council may open or otherwise view evaluation results.

Evaluated persons should not receive or view evaluations for any role they serve. It is intended that supervisors will communicate the evaluation results to those reporting directly to them.

To maintain transparency of the transmittal process, the Faculty Council Chair will be responsible for transmission of the appropriate evaluations to the respective recipients. The following table delineates the evaluations conducted and recipients.

Faculty Council receives input from the President, the Provost, Human Resources Department, Legal Department and the Faculty to come up with an improved procedure to deliver Faculty evaluation and feedback on Administrative Performance

**X. Old Business (Initiated during AY2009-10 or earlier):** (about 15 min)

**Updates on Council Work-in-Progress:**

Section 2.3.2 – The Department Committee on Promotion and Tenure, and **Role of the Deans** (mail paper ballot based voting process to be started on Feb. 16, 2011 Faculty meeting) – (Andrew Klobucar)

## **Current Version**

### **2.3.2 The Department Committee on Promotion and Tenure, and Role of the Deans**

After receiving the supporting material from the Department Committee, the Dean may, in consultation with the Chair of the candidate's Department Committee, make an evaluation in writing which shall be included in the candidate's dossier. The Dean shall then submit the dossier to the University P&T Committee, which completes the Dean's role in the process, unless further involvement is requested by the P&T Committee of the candidate's Department.

If the Department decides to appeal the recommendation of the University Committee on Promotion and Tenure, the dean's letter will be made available to all members of the Department Committee.

## **Draft Revision V04 (12/7/2010)**

### **2.3.2 The Department Committee on Promotion and Tenure, and Role of the Deans**

After receiving the supporting material from the Department Committee, the Dean, in consultation with the Chair of the candidate's Department Committee, makes an evaluation in writing, which is included in the candidate's dossier. The Dean then submits the dossier to the University P&T Committee and sends a copy of his/her evaluation to the Chair of the candidate's Department Committee, for distribution to the entire committee.

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## **Faculty Committee on Student Retention**

(Priscilla Nelson, Chairperson)

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- XII. Open Forum (5 min) – Any Concerns/Topics of Interest/Suggestions**



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- XII. Open Forum (5 min)**
- XIII. Adjournment**