



ISE[®] Southeast Executive Forum and Awards

Keynote Presentation

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Leadership and Collaboration



Company Overview

CLEMSON[®]
U N I V E R S I T Y



- Public university located in the North-West Corner of South Carolina.
 - ~ 21,000 students
 - ~ 6500 faculty and staff
- Ranked 21st Public University in US News and World Reports for 2014.
- Ranked 11th among colleges and universities for producing the 21st Century IT workforce according to *Insurance & Technology* in August 2012.
- Home to a Top 100 Most Powerful Supercomputer in the world (81st)



Security's Unit of Measurement

Security is measured
in failure.





Celebrate!

Today, we want to celebrate our role and the leadership we provide our organizations.





We are unique...

As security professionals, what is our role:

- Authoritative leader
- Strategist
- Educator
- Consultant/Counselor & Risk Manager
- Pseudo lawyer
- Manager of Change, some think change preventer
- Emergency/Crisis Management Director



How I Describe My Job

Managing the Snowflake

- No two situations are the same.
- Constantly changing
- Always more than one way to meet compliance.
- Expectations are rarely repeatable.
- Unexpected

Wouldn't have it any other way.





So what does it take to be an effective leader?

Share with you some of my research.





Leadership Qualities - Desired

LEADER PERSPECTIVE:

1. Ethical
2. Personal Integrity
3. Visionary
4. Team Building
5. Communication

OBSERVER PERSPECTIVE:

1. Ethical
2. Personal Integrity
3. Visionary
4. Intelligent with Practical Judgment
5. Communication



Working alone will only carry us so far. We need to collaborate and share information – real collaboration.



Traditional methods have been across industries.

How about a different partner? The university.



Collaboration

- Universities provide a great opportunity to partner.
 - Highly complex and large network footprint
 - Enterprise class hardware and applications
 - Support wide variety of devices
 - Similar if not more regulatory requirements found in corporate environment.
 - Melting pot of protected, confidential, and sensitive information
 - Intellectual Property and Research
- Most are rich with faculty, staff, and students who are eager to learn and help. Many are already doing research.
- Invest for your future.



Clemson's Initiative

- Center of Excellence in Cyber Security
 - Academic
 - Operations
 - Research
 - Partnership





Security Operations Center (SOC)

- Student centered living laboratory where students get practical experience in security related event detection, response, and management.
- “Showcase” center located on campus, very visual in appearance.
- Idea is to bring the technology, process and procedures of industry into the center.
- Create a talent pool for industry to draw from and to enhance the internship experience.



Recent/Current Research in Security

Sampada Karandikar (MS) “Analysis of Distributed Denial of Service Countermeasures,” (December 2009).

Bhanu, Harakrishnan (MS) “Timing Side-channel Attacks on SSH,” (May 2010).

Craven, Ryan (MS) “Traffic Analysis of Anonymity Systems,” (May 2010).

Abbott, Christopher (MS) “Strengthening the Anonymity of Anonymous Communications Systems,” (May 2011).

Yu, Lu (PHD) “Network Protocol Coordination of Strategic Games” (December 2012).

Chen, Lu (PHD) “Use of Stochastic Grammars in Protocol Detection” (December 2012).

Ozcelik, Ilker (PHD), “Distributed Denial of Service Countermeasures,” (May 2014).

Fu, Yu (PHD), “DNS and IP Address Filtering Countermeasures,” (May 2015)

Husain, Benafsh (PHD) “Exascale Authorization,” (May 2015)

Zhu, Lianyu (MS), “Data Loss Prevention,” (December 2012).

Cameron, KC (MS), “WiMax Denial of Service,” (May 2013).

Hambolu, Oluwakemi (MS), “DNS Filtering Evasion,” (May 2014)

Beasley, Christopher (MS), “Detection with Probabilistic Grammars,” (May 2014)





In Closing

We need to view our roles as leaders and act accordingly.

- Be deliberate and intentional
- Rely on proactive opportunities to help and less reactionary methods to fix.
- Don't fear change, be a part of it – we have to evolve with the organization and technology, the alternative is usually more disruptive and difficult.
- Academia is an un-tapped resource for collaboration.
 - We are looking for partners

